# THE CITADEL

## CATALOGUE 1972-1973

BULLETIN

OF

# THE CITADEL

THE MILITARY COLLEGE OF SOUTH CAROLINA

CHARLESTON, S. C.

1842

FOUNDED 1842

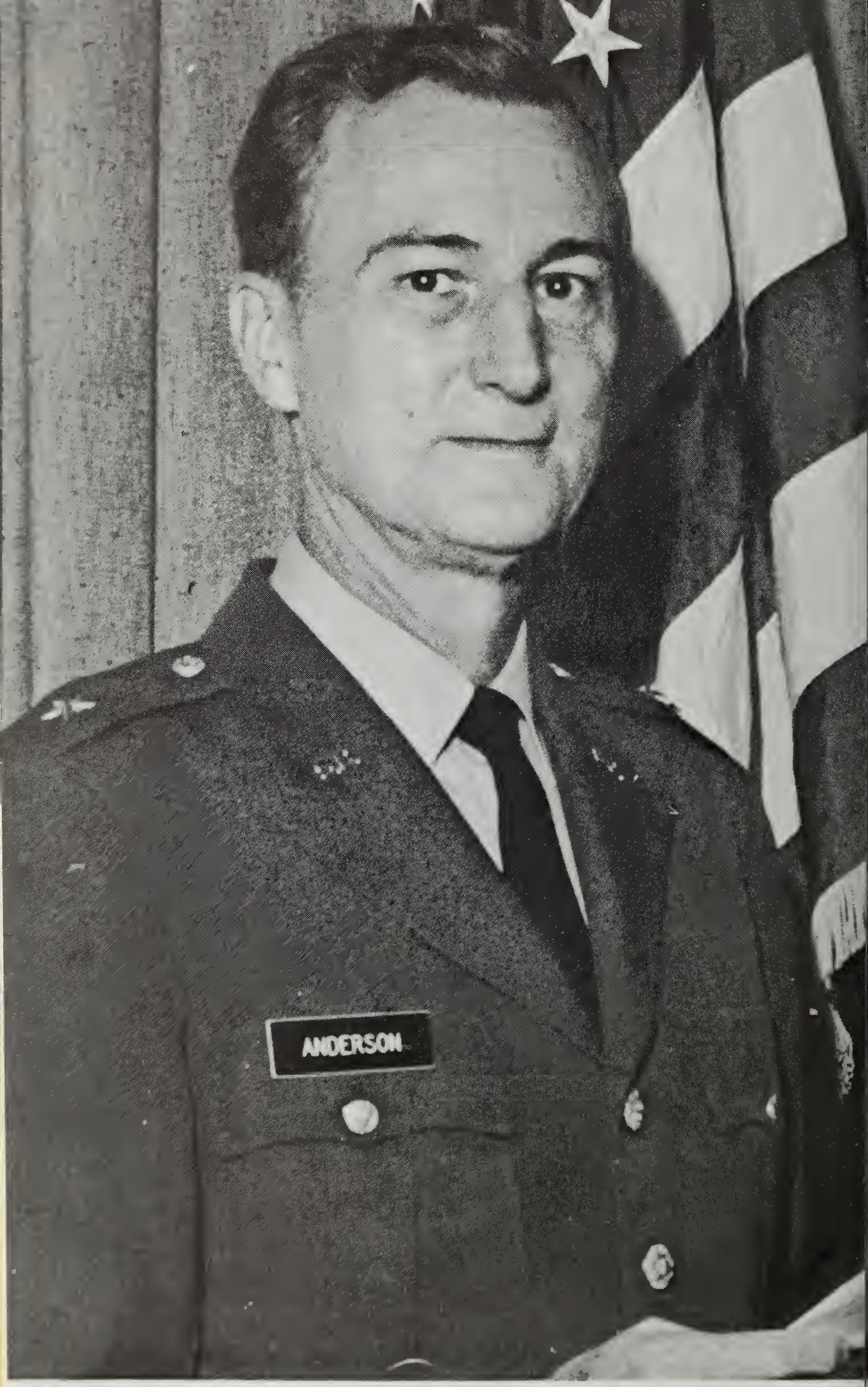
## CATALOGUE ISSUE

1972-1973

*"I call, therefore, a complete and generous education that which fits a man to perform justly, skillfully, and magnanimously all the offices, both private and public, of peace and war."* — Milton.

MAJOR GENERAL JAMES W. DUCKETT

*President*



BRIGADIER GENERAL WALLACE E. ANDERSON
*Vice President for Academic Affairs*

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# College Calendar

## 1972

### SUMMER SCHOOL

| | |
|---|---|
| June 5, Monday | 8:00 a.m. First session begins |
| July 1, Saturday | Classes held (makeup for July 4) |
| July 4, Tuesday | Holiday, Independence Day |
| July 7, Friday | First session ends |
| July 10, Monday | 8:00 a.m. Second session begins |
| August 11, Friday | Second session ends |

### FIRST SEMESTER

| | |
|---|---|
| August 17, Thursday | 2:00 p.m. Training cadre reports<br>Muster formation |
| August 21, Monday | 9:00 a.m. New cadets report |
| August 28, Monday | Noon. Old cadets report |
| August 29, Tuesday | Registration |
| August 30, Wednesday | Classes begin |
| September 6, Wednesday | Last day to add a course or change sections |
| October 19, Thursday | Mid-term grading period ends |
| October 28, Saturday | Parents' Day (Colgate) |
| October 30, Monday to November 3, Friday | Preregistration for second semester |
| November 18, Saturday | Homecoming (Davidson) |
| November 22, Wednesday | After last scheduled class, Thanksgiving furlough begins |
| November 26, Sunday | 6:00 p.m. Thanksgiving furlough ends<br>Muster formation |
| November 27, Monday | Classes resume |
| December 5, Tuesday | Last day to drop a course |
| December 11, Monday | Reading day |
| December 12, Tuesday | Examinations begin |
| December 20, Wednesday | First semester ends |

## 1973

## SECOND SEMESTER

| | |
|---|---|
| January 15, Monday | 10:00 p.m. Christmas furlough ends<br>Muster formation |
| January 16, Tuesday | 8:00 a.m. All students confer with faculty advisors |
| January 17, Wednesday | 8:00 a.m. Registration |
| January 18, Thursday | Classes begin |
| January 25, Thursday | Last day to add a course or change sections |
| March 9, Friday | Mid-term grading period ends |
| March 17, Saturday | Corps Day |
| March 19, Monday to March 23, Friday | Preregistration for fall semester |
| March 23, Friday | After last scheduled class, spring furlough begins |
| April 1, Sunday | 6:00 p.m. Spring furlough ends<br>Muster formation |
| April 30, Monday | Last day to drop a course |
| May 7, Monday | Senior examinations begin |
| May 8, Tuesday | Reading day for lower classes |
| May 9, Wednesday to May 16, Wednesday | Semester examinations |
| May 19, Saturday | Commencement |

## SUMMER SCHOOL

| | |
|---|---|
| June 4, Monday | 8:00 a.m. First session begins |
| June 30, Saturday | Classes held (makeup for July 4) |
| July 4, Wednesday | Holiday, Independence Day |
| July 6, Friday | First session ends |
| July 9, Monday | 8:00 a.m. Second session begins |
| August 10, Friday | Second session ends |

# History of The Citadel

## The Old Location and the New

The history of The Citadel may be divided into two parts. In the first, extending from December 20, 1842, when the legislature of South Carolina passed an act providing for the establishment of the college, to September 1922, the institution was located on Marion Square. This open space of about 10 acres has long been a landmark in historic Charleston. In the second, extending from 1922 to the present, The Citadel has been situated about 2 miles northwest of its former location on a beautiful campus of about 100 acres between Hampton Park and the Ashley River.

## The Origin of the Name

The Citadel derived its name from the building in which it was first housed. Erected with state funds as an arsenal some years after the frustration of the Denmark Vesey slave uprising of 1822, this sturdy old fortress, which still dominates Marion Square, was called The Citadel. It was garrisoned first by Federal troops, then by state troops, until they were replaced in March 1843 by the 20 students who comprised the first Corps of Cadets. These cadets served as guards for the state's arms and pursued a course of study designed to make them useful citizens in time of peace as well as war.

With its sister school, The Arsenal, established at the same time in Columbia, the state capital, The Citadel was a part of what came to be known as the South Carolina Military Academy. In 1845 regulations governing the institution subordinated The Arsenal to The Citadel and thereafter The Arsenal trained only freshmen. The Arsenal burned in 1865 and was never reopened.

The first period of the college's existence on Marion Square lasted until 1865. During this period high standards of intellectual accomplishment and military discipline were maintained, and enrollment increased to 145 cadets by January 1, 1864.

## The Citadel in the Civil War

The founders — men like Governor J. P. Richardson, J. H. Hammond, and General D. F. Jamison, who was later to preside over the convention at which the South Carolina Ordinance of Secession was signed — had foreseen that the state might soon need men with military training. When the trouble long brewing between the North and the South erupted in war, the record of Citadel alumni and cadets vindicated the foresight of the founders. Of the 224 alumni living at the time of the Civil War, 193 wore the Confederate grey, all but 20 as commissioned officers and four as generals. Thirty-nine were killed in battle, and four died in the service. On January 9, 1861 — before the firing on Fort Sumter — cadets of the Corps manned the guns which drove back from the entrance of Charleston harbor the *Star of the West,* a steamer sent by the Federal government to relieve the fort. Made a part of the military organization of the state by legislative act of January 28, 1861, the Corps of Cadets helped emplace and guard artillery on James Island, did guard duty in Charleston, and on December 6-9, 1864, near the war's end, suffered several casualties in an engagement with Union troops at Tulifinny Creek near Yemassee Station, while helping to defend the Charleston and Savannah Railroad.

Very shortly afterwards came years of eclipse for The Citadel. From February 18, 1865, when a Union force marched into Charleston, until April 1879, the buildings on Marion Square were occupied by Federal troops, and the operation of the college was necessarily suspended.

## The Reopening After the Civil War

The second period of The Citadel's existence on Marion Square began on October 2, 1882, with an enrollment of 185 cadets. Though the Corps no longer served as arsenal guard, the military system of the antebellum years was in all other respects continued. The reopening of the college was the culmination of efforts begun by alumni in April 1877. At their request Governor Wade Hampton appointed a Board of Visitors in 1878, and in January 1882 the state legislature passed a bill providing for the re-establishment of the college and appropriating money for the repair of its buildings and for its maintenance.

In 1910 the name of the college was changed to The Citadel, The Military College of South Carolina. In 1918, during the administration of Mayor T. T. Hyde, the City Council of Charleston offered the state the present site of the college.

## The Greater Citadel

In the fall of 1922 the college began operating at its new location. There were then only a few buildings on the campus. In the intervening years many have been added.

Changes in the curriculum and in the nature of the student body have paralleled those in the physical plant.

## The Student Body

In 1921-1922 fewer than 300 cadets were in the Corps. In 1947-48, when the student body was the largest the college ever had, there were 2,271 students enrolled including cadets and veterans. Nearly 3,500 veterans of World War II and the Korean Conflict, most of whom were civilian students, attended the college under Public Law 396, popularly known as the G.I. Bill. The program for veterans ended in September 1960, but was resumed in 1967. Some 300 veteran students now attend The Citadel in addition to the 1,800 members of the Corps of Cadets. Since 1950 women have been admitted to summer sessions, the Evening Program which was originated in 1966, and the Graduate Program, begun in 1968.

Seven hundred Citadel graduates and ex-cadets served in the armed forces in World War I, and about 6,000 alumni and ex-cadets were on active service in World War II. Of these, 280 died for their country. Some 1,500 were on active duty during the Korean Conflict, 450 of whom were in combat and 26 of whom gave their lives. Virtually all graduates on active duty have been commissioned officers. Some are currently serving in Vietnam, where more than 60 have made the supreme sacrifice.

## Memorials to the Makers

Persons prominent in the history of The Citadel are memorialized in campus structures. For example, the largest barracks is named for Colonel James Padgett, member of the Board of Visitors for many years, and Colonel J. P. Thomas, its longtime chairman. The other barracks are named for Andrew B. Murray, philanthropist whose generosity made possible the construction of a barracks and the hospital; Major General Evander M. Law, C.S.A., Citadel 1856, educator; and Major P. F. Stevens, Citadel 1849, superintendent from 1859 to 1861. The dining hall is named for Colonel Asbury Coward, Citadel 1854, superintendent from 1890 to 1908; the liberal arts classroom building for Brigadier General Ellison Capers, C.S.A., Citadel 1857, Episcopal Bishop of South Carolina and chancellor of the University of the South at Sewanee, and his brother, Major F. W. Capers, superintendent from 1852 to 1859; the military science building for Brigadier General Micah Jenkins, C.S.A., Citadel 1854, founder of King's Mountain Military School; the physical education building for Hugh S. Thompson, Citadel 1856, twice Governor of South Carolina, 1882-1884, Assistant Secretary of the U. S. Treasury, 1886, and commissioner of the U. S. Civil Service, 1890; the 22,500-seat stadium, acquired by the college in 1963, for Brigadier General Johnson Hagood, C.S.A., first honor graduate, Class of 1847, Governor of South Carolina, 1880-1882, and chairman of the Board of Visitors at the time the college was re-established after the Civil War; LeTellier Hall, for Colonel L. S. LeTellier, for many years head of the Department of Civil Engineering and later acting president of the college; the largest academic building, for Colonel O. J. Bond, president from 1908 to 1931; the chapel, for General Charles P. Summerall, former Chief of Staff of the United States Army, Citadel president from 1931 to 1953; the student activities building for General Mark Wayne Clark, president emeritus of The Citadel; the chemistry-geology building for Colonel R. M. Byrd, Citadel 1923, first academic dean of The Citadel; and the biology facility for Major General James W. Duckett, Citadel 1932, president of The Citadel.

# General Information

## Educational Standing

The Citadel, a fully accredited senior college, is a member of the Southern Association of Colleges and Schools and of the American Council on Education and is on the approved list of the Association of American Universities.

The Civil Engineering Department is accredited by the Engineers' Council for Professional Development. The Department of Chemistry is accredited by the American Chemical Society.

## The Objectives of The Citadel

The objectives of The Citadel, The Military College of South Carolina, are to offer such courses in the liberal arts and sciences as will develop the minds and characters of the students, increase their likelihood of success in any useful pursuit, and fit them to discharge the duties of citizenship; to provide concentration in certain professional and technical fields which will enable its graduates to compete successfully in business or the professional practice of their specialties; to see that its graduates are adequately equipped in their respective fields of concentration to enter in full standing postgraduate, professional, or technical schools; and to qualify them for commissions in the armed forces through participation in an unsurpassed system of military training.

Entrusted with young men at a critical stage of their development, the college seeks also to provide wholesome activities, services, and facilities which will contribute to the development in its students of character, physical fitness, and moral and religious principles, thereby preparing them to meet the requirements of citizens and especially of leaders.

The Citadel, a state-supported institution, recognizes its obligation to provide needed educational programs as its contribution to the education of South Carolina youth. It will, therefore, actively participate with other state-supported colleges in the Charleston area, by fully utilizing its faculty and facilities, by initiating new programs to accommodate the needs of the citizens of this state, and by developing other ways that it can be of service to a cooperative effort.

## The Purpose of The Citadel's Military Environment

The Citadel is a liberal arts military college. While the college is justly proud of the war records of its alumni and will always expect them to respond in national emergencies, its chief purpose is to prepare men for civil pursuits by giving them a sound education reinforced by the best features of a military environment.

The latter teaches the value of a methodical and orderly approach to tasks, of physical and mental fitness, and of alertness and self-confidence. It teaches how to achieve and maintain morale and discipline. Most important of all, it instills the conviction that sacrifice is preferable to compromise with principle, and that truth, honor, and integrity are the bases of character.

Obviously, many desirable characteristics emanate from sources other than scholarship. For this reason, The Citadel adds the code of the cadet to its academic training. The symbol of this code is the proudly-worn uniform, a constant reminder that alma mater expects of every son not only the objectivity of a scholar, the public spirit of an enlightened citizen, and the honor and integrity of a gentleman, but the courage and prideful bearing of a military leader.

## U.S. Army Program (ROTC)

Army ROTC graduates receiving commissions normally serve from three months to two years on active duty in the Army, depending upon the needs of the service. Those seniors who are designated Distinguished Military Students and, in addition, successfully graduate as Distinguished Military Graduates may be offered Regular Army commissions and will serve a minimum of three years on active duty. Army ROTC seniors who qualify may participate in the light-aircraft pilot-training program.

A large number of Citadel graduates are commissioned each year in the Regular Army. It is a tribute to The Citadel, the caliber of its cadets, and the Army ROTC program that in recent years more cadets from The Citadel have been awarded Regular Army commissions than from any other ROTC unit in the nation.

Prospective cadets who desire a military career should investigate the Army's new ROTC scholarship program. One-, two-, three-, and four year scholarships are awarded each year on a competitive basis. Additional information concerning the procedures for applying for these scholarships and their value can be obtained by inquiry to the Professor of Military Science at The Citadel. For more information on the ROTC program see pages 44-46.

## U.S. Navy/Marine Corps Program (NROTC)

The NROTC program is offered to educate and train well-qualified young Americans who wish to serve their country in the leadership ranks of the Navy or Marine Corps. Two programs are offered at The Citadel. The NROTC scholarship program provides extensive financial assistance and a commission in the Regular Navy or Marine Corps. The NROTC college program offers limited financial assistance for young men who wish to serve their country for a specified period as Reserve officers in the Navy or Marine Corps.

NROTC students study Naval Science and the academic curriculum of their choice. Along with the science of nautical matters, they receive an indoctrination in the background and meaning of our national as well as our naval traditions and become imbued with a patriotic dedication to excellence. Through the principles and practice of leadership, cadets become aware of their own potential and limitations, as well as the potential and limitations of other men. Their training gives them the confidence and encouragement to assume a responsible initiative that has always been the strength of our American way of life.

For additional information concerning application for the NROTC program, NROTC scholarships, and the light-aircraft pilot-training program see pages 46-50.

## U.S. Air Force Program (AFROTC)

The Department of Aerospace Studies is responsible for the operation of the Air Force ROTC program at The Citadel. The purpose and specific objectives of this program are to select and motivate cadets who desire to serve as career Air Force officers in the many challenging fields of endeavor required by the United States Air Force.

Historically, the Air Force has been a voluntary service. It has never sought draftees nor wanted to coerce anyone to join its ranks. Believing that quality begets quality, Air Force ROTC has given a great deal of attention to improving its curriculum and teaching methods, so as to attract superior students. Today, more than ever, the Air Force needs top-quality junior officers in practically every field of endeavor:

pilots, navigators, engineers, scientists, doctors, and lawyers, as well as specialists and managers in such fields as transportation, public relations, procurement, maintenance, communications, electronics, weather, intelligence, law enforcement, accounting administration, personnel, and countless others.

For additional information concerning the procedures for applying for the Air Force ROTC program, Air Force ROTC college scholarships, and the light-aircraft pilot-training program offered by The Citadel AFROTC Detachment see pages 50-53.

## Religious Influences

The Citadel is non-sectarian, but its high objectives cannot be achieved unless its educational program is founded on a solid religious life. Divorced from the spiritual aspirations of the individual and of the group, education is likely to destroy greater values than it creates. The basic purpose of education is to integrate its curricula with character-building activities and a normal religious life to the end that young people may be not only more efficient but better motivated by a sense of duty and obligation. Thus, in an atmosphere of tolerance and mutual respect, every cadet is encouraged to maintain his ties with the religious group to which such association may be made most fruitful.

It is significant that the college in planning its building program included a cadet chapel which in size, dignity, and beauty would be a fitting reminder to all cadets that education must be founded upon spiritual strength. This building, imposing and churchly, always accessible, is dedicated to no denomination or creed, but is a shrine of religion, of patriotism, and of remembrance in which any group of good will and seemly purpose may hold services and feel at home in doing so.

In keeping with the religious emphasis at The Citadel, a full-time chaplain is available to all cadets for counseling guidance and spiritual advice. Colonel Sidney R. Crumpton, retired Army chaplain, assumed his duties on February 1, 1962.

At 9:30 each Sunday morning a General Protestant religious service is held in the Summerall Chapel. The Episcopal service is also held at the same hour in the Episcopal Chapel in Bond Hall. The Jewish and Greek Orthodox services are held at 9:00 a.m. in Mark Clark Hall. At 10:30 a.m. Low Mass is said for the Roman Catholic cadets at the Summerall Chapel. Attendance at chapel services is required for those cadets who are on the campus.

Each Sunday evening at 7:00, a short but impressive Vesper service is held in the chapel for those desiring to attend. A brief devotional period conducted by the cadets is held each evening in each of the barracks. Though attendance is voluntary, the number attending is most gratifying. Each Wednesday evening a Bible class and Prayer service is held in the Summerall Chapel.

Special services are held for Episcopalians on Ash Wednesday and Good Friday and the special early Masses on holy days of obligation for Roman Catholics. During the Advent season, and shortly before the beginning of the Christmas furlough, a great carol service is held. Annually, parallel religious emphasis programs are conducted under four auspices—those for Protestant cadets, for Roman Catholics, for the members of the Jewish faith, and for the Orthodox group. These programs, led by outstanding speakers, are intended to bring into clearer relief a sense of the dignity and manliness of the religious life.

In all the services thus conducted and in the other influences which the college brings to bear on its cadets, the casual and perfunctory is avoided. Cadets are encouraged to regard contacts with their church as vital to their education and development, the act of worship as a deeply significant experience that should be accompanied by dignity, reverence, and gratitude. Thus, on Sunday mornings one viewing the impressive ceremony of battalions of cadets marching across the drill field and converging on the chapel will sense no evidence of mere routine in their attitude. On the contrary, in this spectacle and in the service that follows, there is a fine manifestation of respect and reverence for this hour as the most significant of the entire week. The college realized that these services and the underlying religious life of which they are the outward manifestations must be more than a mere gesture. Otherwise young men will find, as their intellectual horizons widen and they come into possession of the uncertain techniques of lay learning, that there is a temptation to abandon religious teachings as a guide and to substitute "reason" for faith as the ultimate guide. From this peril, education must protect itself by constantly reminding young people that education builds and enriches life not by abandoning religious faith as outmoded, but by accepting it as the source of truth and understanding.

The inscription on the front of the chapel is "Remember now thy Creator in the days of thy youth."

## Religious Groups

Opportunities for religious development also are afforded through the Monday night denominational group meetings. These programs do not exceed an hour in length and are directed by the cadets themselves. Interesting and worthwhile programs are planned in advance by the program committee of each denominational group. Denominational chaplains from the major religious faiths in Charleston act as spiritual advisors to the cadets of their groups. Every cadet is encouraged to participate in these denominational meetings, so that he may leave The Citadel stronger in his faith than before he entered.

The Alpha Omega Society is a non-denominational group composed of pre-theological cadets. These cadets may have committed themselves to being ministers or they may still be considering the ministry as their calling. The society offers them companionship, lectures by visiting ministers, recruiters from seminaries, a guide to help in local churches, and, when possible, field trips to seminaries. The Citadel is justly proud that more than 150 graduates are ministers.

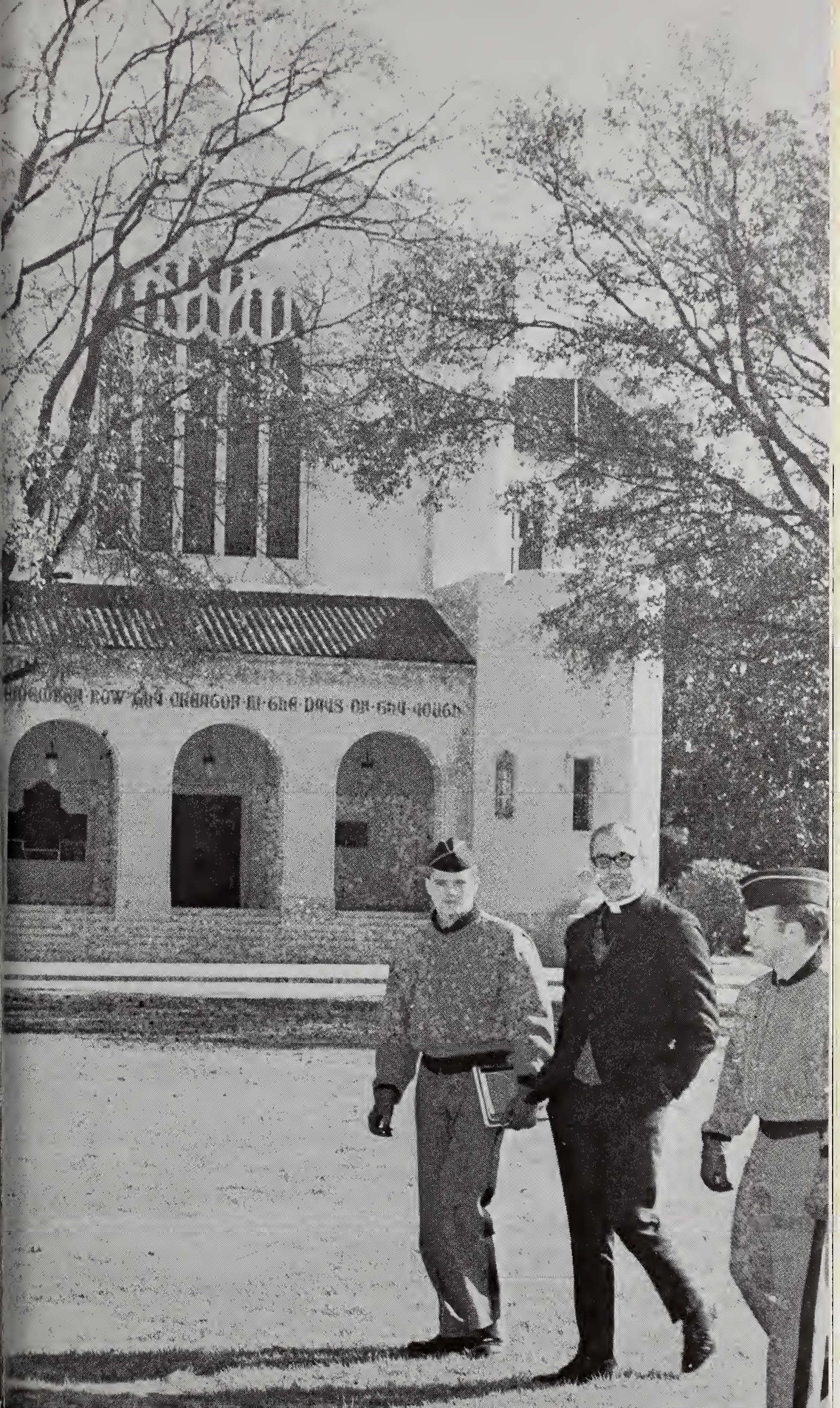
## The Citadel Religious Council

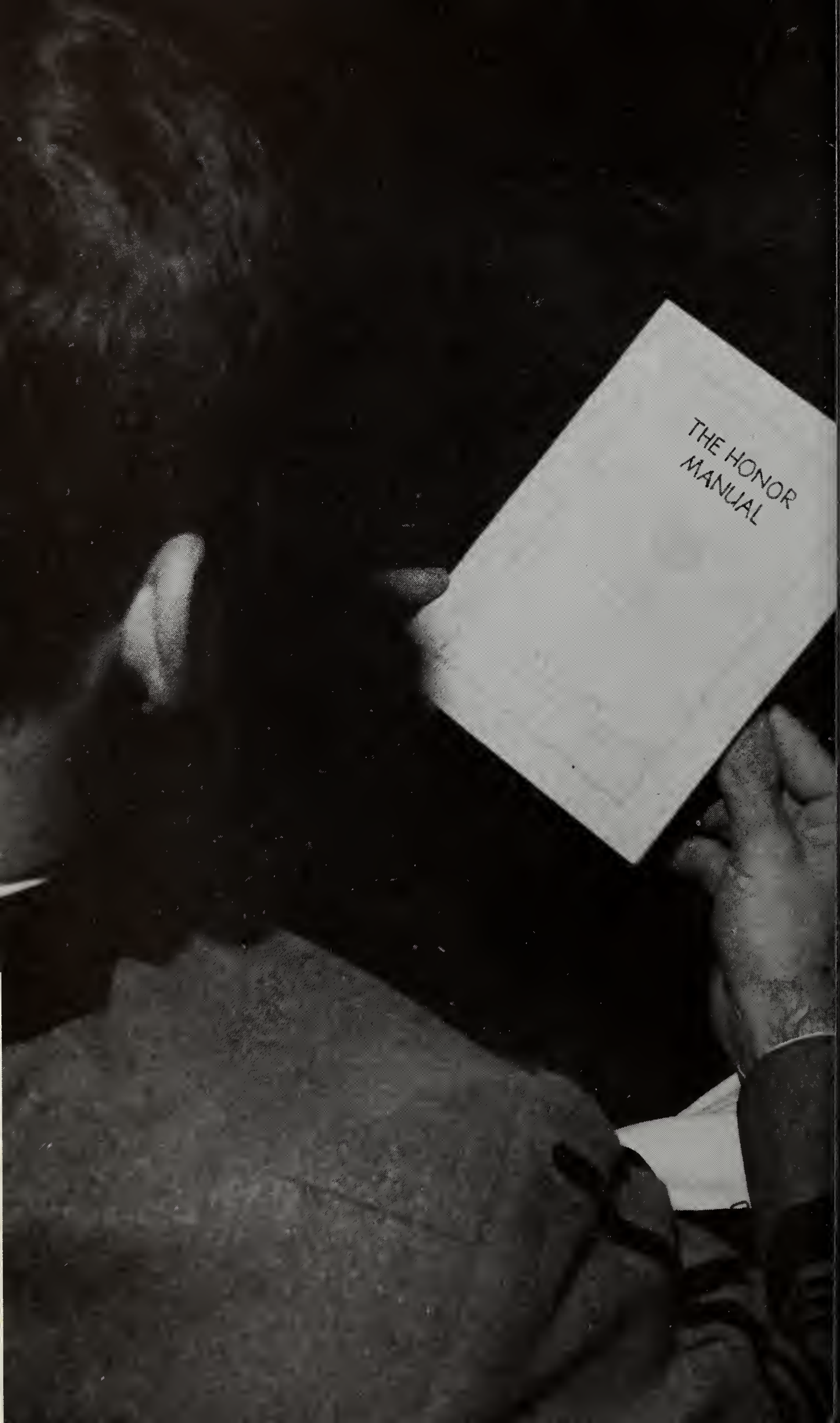
The purpose of the Religious Council is to direct the course of religious activities at The Citadel under the President and with the supervision of the College Chaplain. The planning and supervision of all the religious programs of the year come under the direction of this council.

## Greater Issues Series

The Greater Issues Series was inaugurated in 1954 to bring to The Citadel distinguished individuals who could speak from personal knowledge and experience on current subjects of vital interest. Each speaker is invited to discuss some aspect of public affairs with which he is identified and is especially knowledgeable and on which he can speak with authority.

The 1971-72 Greater Issues Series presented an outstanding group of important persons who discussed from personal knowledge and experience many of the issues that disturb and motivate today's world. Among them were Mr. Art Linkletter, who spoke on the the problems created by drug abuse, and Gen. Jack J. Catton, U. S. Air Force, commander of the Military Airlift Command, who spoke on challenges facing youth.


MEMBER NOW THY CREATOR IN THE DAYS OF THY YOUTH


THE HONOR MANUAL

## THE HONOR SYSTEM

The Honor System of the Corps of Cadets makes a unique contribution to the overall educational process at The Citadel, one of the few colleges in this country that pays attention to the development of a sense of honor and duty as a part of the education of a young man. It is an integral part of the training received by a cadet, and the purpose is to inculcate a sense of honor in each Citadel graduate so that he instinctively conducts himself in an honorable manner under all circumstances.

The Honor Code is of, by, and for the Corps of Cadets. It states simply that a cadet does not lie, cheat, or steal, nor tolerate those who do. The Honor Code is enforced and supervised by a cadet Honor Committee made up of 21 members of the first class who are elected by the three lower classes during the second semester of their second-class year. The Honor Committee has a representative in each company; one of his duties is to instruct incoming freshmen in the Honor System. He also interprets it during the year for all cadets in his company.

When a cadet is reported for an honor violation, the circumstances are thoroughly investigated; then, if there is a prima facie case established against him, he appears before an Honor Court composed of 10 members of the Honor Committee. Conviction by the Honor Court requires a unanimous secret vote of "guilty." If a cadet is found guilty by the Honor Court, he is separated from the Corps of Cadets.

The Honor Committee is responsible directly to the President. Each year he appoints a faculty advisor to the Honor Committee. This officer counsels it and acts in an advisory capacity at each Honor Court trial.

The Honor Committee distributes to all cadets for their guidance an honor manual describing the Honor System and its procedures.

# Requirements for Admission

## Personal Requirements

An Applicant for admission to The Citadel must:

—be a male, at least five feet in height, and physically qualified for ROTC.

—be at least 16 and less than 21 years of age at the time of his entrance.

—be unmarried. No married person will be admitted as a cadet. If a cadet marries, he will be discharged.

—have no record of conviction of a criminal offense showing poor moral character.

—provide evidence from his school authorities and personal references that he is of good moral character and possesses the potential and the personality to conform to the ethical standards and the strict discipline of cadet life. The Citadel reserves the right to require of any applicant a written certificate to this effect signed by at least two graduates of The Citadel.

## Educational Requirements

An applicant for admission to The Citadel must be a graduate of an accredited high school. This basic requirement for admission to the freshman class derives from the college-admission requirements prescribed by the Southern Association of Colleges and Schools, of which The Citadel is a member. The standards of the Association require "the satisfactory completion of a four-year course of not less than 15 units in a secondary school approved by a recognized accrediting agency, or in a secondary school that is a member of this Association, or the equivalent of such a course as shown by examination." Successful completion of the General Education Development examination is accepted as equivalent.

The required high-school subjects are as follows:

—four units of English.

—three units of mathematics, two of which must be algebra. For physical science and engineering majors, the third unit must be plane geometry.

—one unit of history.

A student desiring a B.S. degree in any of the fields of chemistry, engineering, mathematics, or physics must begin mathematics at The Citadel with 30-131 (Analytic Geometry and Calculus). It is strongly recommended that his preparatory background include four units of high-school mathematics with at least one-half unit of trigonometry. Students may qualify for admission to 30-131 by either of the following two methods:

1. By earning a sufficiently high score on the College Entrance Examination Board's Achievement Test, Mathematics, Level I and II.

2. By successfully completing either 30-101 and 30-102 (Fundamental Mathematics) or 30-119 (College Algebra and Trigonometry) at The Citadel.

If the second condition is used, it is suggested that the student should take the qualifying courses in the summer session of The Citadel before entering as a freshman in order to avoid being behind in the four-year program of his choice.

A statement of the courses required each year in each department and a detailed description of these courses will be found on pages 111-143.

## Entrance Examinations

All candidates for admission to The Citadel are required to take the College Entrance Examination Board Scholastic Aptitude Test (SAT). The Mathematics Achievement Test is required for candidates majoring in engineering, chemistry, mathematics, or physics. The Citadel strongly recommends that both the English Composition and the Mathematics Achievement Tests be taken by all applicants, because, in the event an applicant's SAT scores or high school grades are considered too low, these achievement tests may then be required.

In order to apply for these tests, the applicant must write directly to College Entrance Examination Board, P. O. Box 592, Princeton, New Jersey 08540, for its bulletin of information and application blank. These tests are normally offered at locations throughout the United States and in some foreign countries in December, January, and March. An application to take these tests must be submitted to the College Entrance Examination Board at least one month prior to the date of the desired tests.

If an applicant lists The Citadel on his College Entrance Examination Board application as one of the colleges in which he is interested, his test scores will be sent to The Citadel approximately 30 days after the tests are taken. An applicant should complete the required entrance examinations no later than with the January test.

## Admission Procedure

Formal application for admission must be submitted by parent or guardian on the blank application form provided on request by the Registrar, The Citadel, Charleston, South Carolina 29409.

A non-refundable application fee of $10 must accompany each application ($15 for applicants entering in the fall of 1973).

Applications for admission should be submitted early in the prospective cadet's senior year in high school. In addition, the applicant should make early arrangements to take the required College Entrance Examination Board test and have test scores sent to The Citadel. He is also responsible to have his high-school record sent directly from his school.

The Citadel will advise the applicant of subsequent procedural actions as they are required.

A reservation fee of $50 is required of all new cadets accepted for enrollment (in the regular session at The Citadel), payable within 15 days after notification of acceptance by the Registrar. Payment of this reservation fee will insure a place in the Corps of Cadets and will be applied to the first installment of regular college fees; it is not refundable to new cadets who cancel their reservations after June 1.

Each applicant approved for enrollment must undergo a thorough physical examination, the results of which must be reported on the physical examination form provided by the Registrar at the time of notification of acceptance. This form also shows the immunization shots required by The Citadel. Final acceptance is contingent upon the results of this physical examination.

## Admission Policy

The Citadel Committee on Admissions gives equal consideration to all applicants who meet the personal and educational requirements for admission. There is no discrimination because of race, creed, or color. No single factor controls acceptance of an applicant. The Citadel seeks to enroll well-rounded, mature students whose motivation and educational achievement indicate that they are prepared to do college work with reasonable probability of success. Therefore, the Committee on Admissions bases its decision concerning each applicant on an overall evaluation of the following:

1. High-school record (courses, grades, class standing). The high-school record tends to indicate an applicant's motivation, study habits, and scope of interest, thus permitting an evaluation of his educational potential and preparedness to do college work. Particular attention is given to the grades achieved in such college-preparatory subjects as English, mathematics, science, history, and foreign languages.

2. College Entrance Examination Board test scores. An applicant's test scores on the College Entrance Examination Board's Scholastic Aptitude Test and Achievement Tests receive considerable emphasis. Although test scores represent only one factor in the determination of an applicant's acceptability, they tend to indicate his educational development with respect to his contemporaries; therefore, they permit a reasonable evaluation of his actual preparedness and potential to do college work.

3. Recommendations. The personal evaluation of an applicant by a high-school official, normally the principal or the guidance counselor, must include a positive statement that the applicant is prepared, educationally and emotionally, to enter college. This recommendation is of great importance to the acceptance decision because it represents judgments on ability and maturity which derive from considerable experience with and observation of the applicant during his most formative years.

The recommendations of an applicant's personal references augment and reinforce the high-school official's evaluation and are therefore indispensable. They provide the Committee on Admissions with information relative to the applicant's background, personal characteristics, and reputation, as well as additional judgments of his readiness and suitability to enter college.

In general, The Citadel seeks to determine acceptability through a thorough evaluation of each applicant's character, maturity, motivation, readiness for college, amenability and obedience to authority, emotional stability, and potential as a contributor to cadet life. Where any of these factors are in question, the college will obtain additional information by means of any of the following: interviews with the applicant; interviews with parents and/or members of his community; a special report written by the applicant on such subjects as his goals in life, his reason for his choice of The Citadel, and/or the reasons supporting his choice of major field of study; a special test, to be taken by the applicant, designed to examine in detail any aspect of the applicant's character or potential.

## Advanced Placement and Credit

The Citadel awards advanced credit and advanced placement where appropriate to applicants who score four or five on CEEB Advanced Placement Examinations given by the Educational Testing Service in the 11 fields of study listed in the 1970-72 Course Descriptions in the College Entrance Examination Board's Advanced Placement Program. The examination paper of a candidate scoring three will be reviewed by The Citadel academic department head concerned with the field of study, and advanced placement may be given with or without credit.

Advanced language placement may be granted upon recommendation of the department head and the approval of the Vice President for Academic Affairs. The department head's recommendation would be based upon evidence, usually derived from an interview with the entering cadet, of proper preparation and achievement to assure success in the advanced course. Qualified students will be allowed to bypass elementary or intermediate language courses. In general, those who have had two years of foreign language in high school or the equivalent should be able to take intermediate courses (201-202 or 203-204). However, they have the right to start any language at the basic level (101-102) if they so desire.

In all cases of advanced placement, no credit is awarded for the bypassed course or courses; electives will be required to make up for the bypassed semester hours.

## Initial Acceptance and Withdrawals

New cadets are admitted to the Corps of Cadets only in September but may commence their academic work in the summer. Veteran students may be admitted at the beginning of either semester or either summer term.

If a cadet finds it necessary to withdraw from The Citadel during the college year or does not wish to return to The Citadel the September following any college year, a written request for an honorable discharge must be sent by his parent or guardian to the Registrar.

If a veteran student finds it necessary to withdraw or not to return the following semester, he must submit a written request for a discharge to the Registrar.

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## Special and Veteran Students' Admission

Admission Requirements:

Special or veteran applicants for admission must be graduates of accredited high schools or have been awarded equivalency certificates for satisfactory completion of the General Education Development examination. Each applicant should present the equivalent of four units of high-school English, three units of mathematics, two of which must be algebra, and one unit of history. For physical science and engineering majors, the third unit of mathematics must be plane geometry. An applicant must submit scores from the College Entrance Examination Board Scholastic Aptitude Test (SAT), unless waived by evidence of previous satisfactory college work, as determined by the Admissions Committee. A Certificate of Eligibility from the Veterans Administration must be filed with admission records.

Admission Procedure:

—Submit a completed application with non-refundable $10 application fee ($15 for applicants entering in the fall of 1973).

—Ask any high school attended to send a complete transcript of your record.

—If you completed high school by taking the GED test, submit a copy of the equivalency certificate.

—If you attended college, ask the Registrar to send directly to The Citadel complete transcripts of your records.

—Request College Entrance Examination Board to send to The Citadel, Office of the Registrar, your latest SAT scores.

—If the College Board Scholastic Aptitude Test has not been taken, an application form may be obtained by writing directly to College Entrance Examination Board, P.O. Box 592, Princeton, New Jersey 08540.

—In order to complete your file with The Citadel Veterans' Office, you must obtain a Certificate of Eligibility from the Veterans Administration and submit it to The Citadel. Eligibility for such a certificate is an absolute requirement for admission.

—After receipt of all necessary information, you will be notified concerning your acceptance to the Veterans' Program at The Citadel.

# Academic Policies

## Grades

Only letter grades are given to evaluate a student's progress. The following definitions of letter grades are applicable:

1. "A" represents superior attainment on the part of the student.
2. "B" represents work that is clearly higher than the average, but not superior.
3. "C" represents average attainment of the basic standards set for the course.
4. "D" represents minimum attainment of the basic standards.
5. "F" represents failure.
6. "I" represents work of satisfactory quality incomplete for authorized reasons. Incomplete (I) grades must be made up during the following full semester after the recording of the grade. If the grade is not made up in this period of time, it will be changed to a grade of "F." The summer session will not be considered a semester in this case. An extension of time due to extenuating circumstances may be authorized by the department head and the Vice President for Academic Affairs.

No numerical symbol, bracket, or percentage is fixed or assigned the equivalent of any grade. Arbitrary distribution of grades according to some formula or curve is not used to obtain uniformity of grading. However, by means of departmental supervision and consultation between instructors, every effort is made to obtain consistent grading procedures within the departments.

Whenever a course previously passed is repeated, the last grade made for the course is the grade of record for computing quality points and grade-point ratio. No course may be taken more than three times at The Citadel for a grade.

Grade reports are mailed to parents or guardians at the end of each semester. Mid-semester progress reports are sent to parents showing the status of the student's academic work at that time.

Changes in schedule must be effected during the first seven days of the term. A course dropped before the end of the mid-term grading period will receive no grade, and the course will not appear on the permanent record. A course dropped after this date will receive a grade of WP (withdrew passing) or WF (withdrew failing). A full-time student, however, must continue to take courses with at least 12 semester hours credit each semester.

For purposes of ascertaining quality and grade-point ratio (GPR) to determine class standing or promotion, grades are weighted as follows:

| Grade | Grade Points Per Semester Hour |
|---|---|
| A | 4 |
| B | 3 |
| C | 2 |
| D | 1 |
| F, WF, WP, I | 0 |

The grade-point ratio is determined by dividing the total number of quality points earned by the total number of semester hours attempted, including the hours for which the following grades were received: A, B, C, D, F, WF, I.

In computing the GPR, quality points and hours earned at other institutions are not included in the totals.

Semester hours earned at other institutions are included in determining eligibility for promotion and compliance with standards on graduation, academic probation, and discharge.

## Pass-Fail Grading System

Juniors and seniors with cumulative grade-point ratio of 2.0 or better may elect courses on a pass-fail option, but no more than one each term or a total of four for graduation credit. A student may not take on the pass-fail option any course which is required in his major. The decision of whether or not the course a student chooses is required in his major is the responsibility of the head of the student's major department. The student may not change his decision to take the course on the pass-fail basis or for a letter grade after the first two weeks of the term. Courses elected on the pass-fail option carry graduation credit, but no quality points, and are not included in GPR computations.

Instructors report grades as usual; A through F, WP, WF, Incomplete. The Records Office translates grades as follows:

1. A grade of A through C as "S" (satisfactory, pass - for credit)
2. A grade of D or F as "U" (unsatisfactory, fail - no credit)

## Transfer Credits

Entering students who desire transfer credits from other accredited colleges will have official transcripts sent to the Registrar of The Citadel and will provide catalogue descriptions of the courses involved. The head of The Citadel academic department concerned and the Registrar will then evaluate the courses to determine those for which transfer credit will be allowed. Only grades of "C" or better will be considered for transfer credit.

Students who expect to continue enrollment at The Citadel or to return after withdrawing may take courses at other accredited institutions for transfer to The Citadel provided prior authorization is obtained. To be eligible for transfer, courses must be certified by the department head concerned as equivalent to a course at The Citadel, and the semester hours transferred will not be greater than for the equivalent Citadel course.

All transfer credits are provisional. If a department involved finds within four weeks after classes begin that the student is not prepared to take a course for which the course transferred is a prerequisite, the allowance or credit is withdrawn, and the student must take the prerequisite course at The Citadel.

To be eligible for graduation, all students, including transfer students from other colleges, are required to earn at The Citadel a minimum of one-half the semester hours prescribed for the major course of study.

Candidates for degrees who do not complete all requirements for graduation when scheduled may take not more than two approved courses at another institution for transfer to The Citadel. Prior approval of these courses by the department head concerned is mandatory. Normally the only courses which can be taken elsewhere will be those not offered at The Citadel during the summer session or semester involved.

## Promotions

Conditions for promotion to a higher class are given in the following table. A student on probation will not be promoted.

| To Class | Number of Semester Hours Behind in Major Program | Accumulated Quality Points |
|---|---|---|
| Third | Not more than eight (8) | 42, at least |
| Second | Not more than eight (8) | 120, at least |
| First | Must be able to graduate in two semesters | 195, at least |

In addition, for promotion to the first class, the student must have completed all the courses required in his academic major for the fourth and third classes. Exception to the course requirement will be made for the foreign language for those students who transfer at the end of the third-class year from one major to another involving a different foreign language.

## Academic Probation and Discharge

a. Any full-time student who fails to pass successfully 24 semester hours in each 12-month period after entrance will be discharged for academic deficiency.

b. A student will be put on probation for a semester or discharged for academic deficiency if at the beginning of any semester his cumulative ratio of quality points earned at The Citadel to credit hours passed at The Citadel falls below the minimum for his category as shown in the following table:

**Minimum Ratio of Quality Points to Credit Hours Passed**

| Credit Hours Passed | For Continuance (on Probation) | For Continuance (without Probation) |
|---|---|---|
| 0-39 | 1.20 | 1.30 |
| 40-69 | 1.30 | 1.40 |
| 70-99 | 1.50 | 1.60 |
| 100 & above | 1.70 | 1.80 |

c. A student on probation in any category must by the beginning of the next semester remove himself from probation if he remains in the same category or be eligible to continue in college if he progresses to the next higher category.

d. Penalty for Probation

A student on probation will be denied the following:

1. Class leave privileges as specified by the Commandant of Cadets and approved by the Vice President for Academic Affairs.
2. Holding of cadet military rank.
3. Authorization to take any course overload.

e. A student will not be subject to academic discharge rules until the end of his second semester at The Citadel.

f. A student placed on academic probation more than twice after his first two semesters will be discharged for academic reasons.

g. A student who is discharged for academic reasons the first time may apply for readmission after being out of school for one semester. (Summer school does not constitute a semester in this instance.) If approved by the Admissions Committee, he will be readmitted on a probationary status for one semester and must obtain the minimum ratio of quality points to credit hours passed for his category for continuance in college at the beginning of the next semester. If a student is discharged for a second time for academic reasons, he will not be considered for readmission.

h. To continue in school after the eighth semester requires the approval of the Academic Probation Committee.

## Readmission Policy

A student wishing to return to The Citadel, having withdrawn, must file an application for readmission with the Registrar. Action on this application is determined by the Committee on Admissions, which will consider not only the applicant's past academic record, but also his suitability as a member of the Corps of Cadets. The recommendation of the Committee on Admissions must have the approval of the President.

Cadets who withdraw due to academic deficiencies will be ineligible for readmission consideration until the lapse of one semester of the regular school year. (The summer session is not considered a semester in this instance.) If a cadet who has been discharged for academic deficiencies is accepted for readmission, he will be on probation the following semester.

Any departure from this policy may be made only in cases with extreme extenuating circumstances.

## Requirements for Graduation

For graduation, a student must complete satisfactorily one of the departmental major courses of study stated in this catalogue. He must accumulate at The Citadel quality points amounting to twice the number of semester hours passed at The Citadel.

A student must complete, in residence, a minimum of one semester with at least 12 semester hours of passing work, approved by the department concerned, after his final change of major prior to graduation. (For purposes of this policy, both halves of a summer session will be considered a semester.)

Normally, requirements for graduation are met by full-time students in four years, but a longer time may be required by those who are discharged and then granted readmission. Whenever it becomes evident that a full-time student cannot fulfill all the requirements for graduation within five academic years (10 semesters), he will be discharged for academic deficiency.

In addition to the formal credits required for graduation, the candidate must have demonstrated that he is of high character and worthy to receive the diploma of the college. Recommendations for graduation are made by the Academic Board to the Board of Visitors, which in turn awards the degrees.

## Degrees

The degree of Bachelor of Arts is conferred upon satisfactory completion of the Chemistry, English, History, Mathematics, Modern Language, Psychology, or Political Science programs of study. The degree of Bachelor of Science is conferred upon satisfactory completion of the Biology, Chemistry, Education, Mathematics, Physical Education, or Physics program.

The degree of Bachelor of Science in Business Administration is awarded to students who complete satisfactorily the program in Business Administration.

Graduates in Civil Engineering receive the degree of Bachelor of Science in Civil Engineering. Graduates in Electrical Engineering receive the degree of Bachelor of Science in Electrical Engineering.

## Classification of Cadets

The cadets are arranged in four distinct classes, corresponding with the four years of study. Cadets pursuing the first year's course constitute the fourth or freshman class; those taking the second year's course, the third or sophomore class; those in the third year's course, the second or junior class; and those in the fourth year's course, the first or senior class.

# Military Policies

## General

The Citadel is justly proud of the record of its military training program which contributes significantly to the State of South Carolina and the nation in the form of military and civilian leadership. The Citadel is one of the few essentially military colleges remaining in the country. Today, Citadel graduates are adding to the rich heritage of their alma mater as officers in the armed forces and as leaders in the state and nation.

The military training at The Citadel is conducted by active duty officers and noncommissioned officers of the U.S. Army, U.S. Marine Corps, U.S. Navy, and U.S. Air Force. These active duty military and naval personnel are organized into the Department of Military Science (Army Reserve Officers' Training Corps), the Department of Naval Science (Naval Reserve Officers' Training Corps), and the Department of Aerospace Studies (Air Force Reserve Officers' Training Corps). Military and naval training is conducted for all cadets attending The Citadel, since it is a college requirement that all graduates must complete either the Army, Naval, or Air Force program. Additional information concerning the military programs offered at The Citadel may be found in the departmental section of this catalogue.

## Commandant of Cadets

The Commandant of Cadets commands and administers the Corps of Cadets and its daily routine of duties. He grants leaves and other privileges provided by regulations and is charged with the maintenance of discipline over all students attending The Citadel. The Commandant exercises supervision over barracks, controls the officer-in-charge and the cadet guard, and keeps the President of the college informed on matters pertaining to the administration, conduct, and discipline of the Corps of Cadets.

## Discipline

Because The Citadel is a military college, high standards of conduct and discipline must be maintained. Through a system of merits and demerits, a record is kept of the conduct of each cadet. This record influences his military standing. Privileges are curtailed for those cadets who fail to respond to ordinary corrective measures. Any cadet exceeding the allowed limit of demerits may be dismissed.

By instruction and example cadets are taught to be neat in person and in uniform. Daily inspections of rooms insure cleanliness and good order. Through individual personal contact and group meetings, cadets are encouraged to uphold the traditions of The Citadel and the standards of honor, integrity, and courtesy which are an outstanding mark of the cadet and gentleman.

## Management

Leadership, initiative, and character are developed by placing upon cadets the stimulating responsibilities of command within the organization.

All cadets live in barracks. From reveille to taps, every hour of the cadet's time is accounted for. The regular habits of study and living thus formed, the attention to duty, obedience to authority, and appreciation of order inculcated are considered among the most valuable features of the military education. While some of the graduates enter the military profession, hundreds in all walks of civil life attest to the high value of the training received at the institution.

The daily routine is regulated by the *Cadet Regulations,* generally known as "The Blue Book."

## Allowances of Demerits

When any cadet accumulates more than 15 demerits per month in his senior year, 17 per month in his junior year, 19 per month in his sophomore year, or 25 per month in his freshman year, such cadet shall be declared deficient in conduct. Cadets repeating the fourth-class year are allowed but 19 demerits per month.

## Customs and Courtesies

A booklet published at The Citadel is designed to provide cadets with a compact manual of good deportment. It is the textbook in a course in deportment given under the supervision of the Commandant of Cadets.

After explaining clearly the value of a knowledge of the correct way of conducting oneself in social contacts, the booklet presents detailed information on such matters as personal appearance and dress, correct speech, table manners, introductions, calling cards, calling, social correspondence, overnight visits, and punctuality.

## Automobiles

Cadets of the first, second, and third classes, if they are proficient academically and in conduct for the preceding semester, are granted the privilege of having cars and parking them in assigned class parking areas on the campus. The privilege may be withdrawn on loss of good standing. Cars must be registered with the Provost Marshal. Evidence of legal state registration must be shown, and all registrants will be required to have a minimum of bodily injury liability insurance, $10,000 per person, $20,000 each occurrence, and property damage liability insurance, $5,000 each occurrence. Parking permits in the form of stickers will be issued to each registrant on the day he brings his car on the campus. Stickers will be affixed permanently on the left-front and the rear bumpers of the car. Parking fees and stickers are $5 per semester or portion thereof. Upon approval by the Provost Marshal, a two-week temporary parking permit, without charge, may be authorized. All cars parked on The Citadel campus and property will be parked at the owner's risk.

## Leaves

By applying for permission for their sons' entry to The Citadel, parents voluntarily relinquish control over them to the authorities of the college, and it is expected that they will not ask for leaves for their sons except in emergencies. In every case the reason for the leave must be stated and the decision left to The Citadel authorities whether the circumstances warrant the approval of the application. This must be done before leaves will be approved.

The paragraphs which follow are extracted from *Cadet Regulations:*

126.07. Emergency Leaves: a. Emergency leave may be granted only upon the request of the parent or guardian in the event of death or critical illness of a member of the cadet's immediate family. Duration of this leave will be predicated upon distance and time required, but should normally not exceed 72 hours. The immediate family includes parents, grandparents, brothers, sisters, and the permanent resident members of the family.

b. "Critical illness" is defined as an illness of such proportions that death is imminent.

Special leave may be granted upon the request of the family or guardian in the event of the marriage of a member of the cadet's immediate family or golden wedding anniversary in the cadet's family.

Cadets may be granted special leave for such unusual business affairs as cannot be arranged by correspondence, but require the presence of the cadet in person, in which case applications from parents or guardians stating the circumstances are required. In all cases, the final decision must rest with the authorities of the college.

The Citadel has a liberal weekend and overnight leave policy based on increasing class privileges for cadets who maintain academic and conduct proficiency.

Suspension of work for 10 days, including Christmas Day and New Year's Day, is required by law. Normally furloughs are granted at Thanksgiving, at Christmas, in the spring, and upon completion of the second semester.

The following paragraphs pertaining to medical leaves are extracted from *Cadet Regulations:*

140.09. Cadets Forbidden to Arrange for Medical Services: Except in emergency occurring on leave and requiring immediate medical attention, a cadet will not arrange for or receive professional treatment from doctors or specialists without permission of the Surgeon. Applications for any special leaves required for such treatment will be submitted to the Commandant and referred to the Surgeon.

140.11. Special Medical and Dental Services: a. Dental work, special examinations of the eyes, etc., should be looked after during the summer, Christmas, or Easter furlough periods. Special leaves will not be granted for these purposes.

b. In cases of emergency, there are competent specialists and ample facilities in Charleston to take care of any medical or dental needs of cadets. In matters of health, the Surgeon will advise the proper course to be taken.

c. In case the service of a local dentist, oculist, or other specialists is deemed necessary, the request therefor will be submitted to the Surgeon, who, if he approves the request, will make all necessary appointments for the cadets. No appointment with physicians other than the Surgeon will be made by any cadet to keep an appointment with a doctor in Charleston.

## The Fourth Class System

The purpose of the Fourth Class System at The Citadel is to lay the foundation, early in a cadet's career, for the development of those qualities of character and discipline implied in the mission of The Citadel as a military college—to produce young men with alert minds and sound bodies who have been taught high ideals, honor, integrity, loyalty, and patriotism; who accept the responsibilities which accompany leadership; and who have sufficient professional knowledge to take their places in a competitive world.

These personal qualities must be deeply ingrained in the individual so that neither time nor troubles will diminish his respect for complying with the customs and traditions set down for the fourthclassman's conduct. The tradition of The Citadel cannot be maintained by men who will do no more than is required of them. Self-discipline and self-evaluation develop men whose integrity and sense of duty cause them to serve selflessly beyond the prescribed limits of their tasks.

The Fourth Class System is both difficult and demanding. It represents an abrupt change from the life normally experienced in the home and encompasses the entire period of a cadet's first year at The Citadel. It is administered impersonally but at the same time exhibits the individual understanding necessary to effective leadership. It requires a full measure of mental preparedness and physical endurance.

Because of the nature of the new cadet's training during his first weeks at The Citadel, physical demands upon him are necessarily great. Experience indicates that the cadet who, prior to admission, has conditioned himself physically is best able to meet the training requirement. The candidate should strive for the degree of conditioning required for vigorous team sports. He is advised to practice heavy physical conditioning exercises (such as pullups, situps, and pushups) until many repetitions of the exercises can be performed without severe physical strain. In addition, he should strengthen his legs and wind by regular cross-country running. A program of vigorous competitive sports should be followed, with emphasis on a variety of sports rather than one favorite activity. Any candidate in doubt about his physical-conditioning methods would be well advised to consult a high school or college physical education department. In addition, every applicant for entry into The Citadel should be assured by his physical examination that he has no history of physical ailments that might prove recurrent.

The Fourth Class System by nature is arbitrary on the surface. It demands prompt and unquestioning obedience of authority through the use of a collection of customs and traditions. However, each of the elements or customs has a specific purpose of furthering a cadet's development.

The system includes standing at a rigid position of attention, turning square corners when walking, undergoing neatness inspections before formation, learning various items of fourth-class knowledge, working on approved company details such as minor chores, incident to keeping one's own area of barracks in order, and submitting to a variety of minor restrictions concerning the use of certain campus grounds and facilities, the wearing of the uniform, and the general conduct of a fourthclassman.

Cadets who are unable to meet the desired standards or violate one or more of the customs are subject to corrective action. This can range from a verbal reprimand to walking tours on the quadrangle of barracks. Other disciplinary measures include restriction to limits of campus, undergoing special inspections, and participating in special constructive physical training periods like those employed by the U.S. armed services. In extreme cases, any cadet who is unable to conform to the military way of life may be brought before a suitability board to determine his fitness to continue at The Citadel.

The measures described above are designed to test a cadet's mettle and to determine his motivation for cadet life. Their value lies in developing a cadet's ability to perform his duty successfully under trying and stress-producing conditions.

Hazing is not a part of the Fourth Class System and is not condoned. The suffering of degradation, humiliation, and indignity does not foster the rapid development of those qualities sought in fourthclassmen.

At The Citadel, where the system is administered by upperclass cadets and where all the cadets live together in barracks, the presence of individuals who are obsessed with the idea that indignities and humiliation are part of a student's education cannot be and is not tolerated. No cadet is wanted in the Corps who does not subscribe voluntarily to the regulations which absolutely bar hazing. The occasional upperclassman who misuses the system is dealt with severely.

It is to be emphasized that the Fourth Class System is a formidable challenge to any young man. The decision to enter The Citadel must be preceded by a conviction on the part of the prospective cadet and his parents that he has the mental and physical characteristics appropriate to the system, and that he possesses a willingness to undergo the system's rigors with a determination to see it through and to reap its benefits.

Although the system is demanding and difficult, the rewards are considerable. They more than justify the effort. At recognition by the Corps in June, a better man emerges—one who is mentally, morally, physically, and spiritually prepared to accept the reins of leadership which will ultimately be his at The Citadel and in the world.

## Selective Service

Cadets accepted for formal enrollment in Army, Naval, or Air Force ROTC and who have not reached their 18th birthday before reporting to The Citadel are, by special provisions of law, exempted from registering for Selective Service. (Requirements for formal enrollment are listed under ROTC Programs.) Those cadets who have already registered with the Selective Service and are formally enrolled in The Citadel ROTC program are exempt from induction by such enrollment, and the Military Science, Naval Science, and Aerospace Studies Departments will notify draft boards of these exemptions. However, both conditions continue only so long as the cadet is formally enrolled, and the Military Science, Naval Science, and Aerospace Studies Departments are obligated to inform local draft boards when such status changes.

Cadets of draft age (18 years or above) who fail to qualify for formal enrollment and/or who are removed from formal enrollment are responsible for registering for Selective Service. The Citadel Registrar will send Selective Service Form 109 to such cadets' Selective Service Boards informing the boards of the cadets' student status.

# ROTC Programs

## ARMY ROTC PROGRAM

The objective of the United States Army Detachment at The Citadel is to provide Military Science instruction to develop the qualities and attributes required by successful Reserve or Regular officers of the United States Army. As a result of this instruction, The Citadel cadet receives not only an academic education but a well-rounded background including the best features of the military: a high sense of honor and duty, self-discipline, personal integrity, and the ability to lead men. This training provides The Citadel graduate with the high personal standards and character traits that are continually demonstrated by Citadel alumni as leaders in the armed services or in their civilian communities.

### U.S. Army ROTC Graduates

Army ROTC graduates receiving commissions normally serve from three months to two years on active duty in the Army, depending upon the needs of the service. Certain cadets who, at the start of their first class year, have clearly demonstrated high moral character and outstanding leadership and academic ability may be selected as Distinguished Military Students, and those who graduate as Distinguished Military Graduates have the option of applying for direct appointments in the Regular Army and will serve a minimum of three years on active duty.

Formal enrollment in the advanced course involves both signing a contract with the government and enlistment in the U. S. Army Reserve. Under the terms of the contract, the signer agrees to accept a commission if it is offered and to serve on active duty for two years or six months, depending upon the needs of the Army. As long as the cadet continues his enrollment in the advanced course, he will not be required to participate in Reserve training nor will he be ordered to active duty for training or activity duty. If as a result of willful evasion of the terms of his advanced course contract he does not complete the Senior Officers' Training Corps program or if he completes the course of instruction and declines to accept a commission when offered, the cadet may be ordered to active duty in his enlisted grade for not more than two years.

Disenrollment by reason of physical or academic deficiency is not construed as "willful evasion," and in such cases, disenrolled cadets will not be ordered to active duty under the terms of their contract.

## Army Flight Instruction Program

A number of firstclassmen, selected after a physical, mental, and leadership evaluation, will be permitted to participate in the Army flight instruction program as part of their ROTC instruction. This program serves to motivate students to seek a career in Army aviation, and also serves as a program for screening applicants for Army aviation training. The program consists of approximately 71 hours of ground and flight instruction. Cadets may be awarded the Federal Aviation Administration private pilot's certificate upon completion of this training. A cadet who receives departmental approval may take this course as an elective and receive three hours of academic credit for it.

## Scholarships

The Army sponsors four-, three-, two-, and one-year scholarships for outstanding students who are interested in careers as Army officers. Each scholarship provides for free tuition, textbooks, and laboratory fees in addition to a subsistence monetary allowance for the period that the scholarship is in effect.

## Emoluments

The Department of the Army provides certain reimbursements to cadets enrolled in the Army ROTC program. Cadets enrolled in the basic course will have $62 uniform allowance credited to their accounts each year. Those cadets formally enrolled in the advanced course (which includes signing a contract with the government and enlistment in the Army Reserve) will have $95 uniform allowance credited to their accounts each year in addition to $100 subsistence allowance paid to them by check each month. During their summer camp they will receive one-half the base pay of a second lieutenant plus $0.06 per mile travel pay to and from camp.

Tuition and other fees are paid for cadets attending The Citadel on Army scholarships. Basic-course scholarship cadets are also paid $100 each month for subsistence.

## Formal Enrollment Requirements

The basic requirements for formal enrollment in Army ROTC are shown below. These must be fully met before the Professor of Military Science can consider a cadet for formal enrollment in the Army program. Cadets who do not meet these requirements are not entitled to ROTC allowances and will be ineligible for commissions.

Be a citizen of the United States.

Be physically qualified under Department of the Army standards.

For the basic course, a statement by The Citadel Surgeon that a cadet can perform "normal military duties" usually suffices. An Army-administered physical examination, required for formal enrollment in the advanced course, is given to all thirdclassmen (sophomores) in the spring. Waivers of physical defects are granted only in exceptional cases, and then only by authority of the Department of the Army. Any degree of uncorrected vision is acceptable provided visual acuity is correctable to 20/40 in one eye and 20/70 in the other eye, to 20/30 in one eye and 20/100 in the other eye, or to 20/20 in one eye and 20/400 in the other eye. Both eyes must be free from any disfiguring or incapacitating abnormality and from acute or chronic disease.

Maintain satisfactory academic standards with his class.

Maintain a satisfactory leadership rating. This rating is determined by the Commandant of Cadets, the Professor of Military Science, and other appropriate Citadel officials.

Be of good moral character. Cadets convicted by civil or military court for offenses other than minor traffic violations are not eligible for formal enrollment without specific approval of the Department of the Army. A cadet may apply for a waiver of conviction, provided the offense was non-recurring and did not involve moral turpitude.

Pass ROTC qualifying examination which is administered during the third class year. Failures cannot be formally enrolled unless a waiver is received, and these are granted only in exceptional circumstances. No repeat examinations are authorized.

## NAVY/MARINE ROTC PROGRAM

The Citadel's Naval Reserve Officers' Training Corps Unit is the only such unit in the country that is essentially Marine oriented. Although the unit is primarily concerned with developing Marine officers, Naval cadets may, while attending The Citadel, qualify for commissions in the U.S. Naval Reserve or Marine Corps Reserve. Because of its unique location in a coastal city with a major Naval complex to render support, this unit is perhaps unequaled in its ability to educate and train Naval officers.

Two programs leading to commissioned grade in the Naval Service are offered: The Navy-Marine Corps scholarship program for selected Naval scholarship cadets assigned to The Citadel who have their tuition and the majority of their college expenses paid for by the Navy Department; and the Naval ROTC college program for cadets who seek Naval commissions and receive limited financial assistance during their junior and senior years.

## Navy-Marine Scholarship Program

Navy-Marine scholarship students are selected through national competition and attend one of the 50 colleges or universities with a Naval ROTC unit. Each year a number of Naval ROTC college program cadets at The Citadel may receive direct scholarship appointments from the Professor of Naval Science. The Naval scholarship cadets attending The Citadel may enroll in any academic major offered. These students enlist in the Naval Reserve and attend three officer summer training cruises with pay. In return, the Navy Department provides tuition, fees, all textbooks, a uniform allowance, and pays at least $100 a month subsistence allowance. Upon graduation Naval scholarship cadets are commissioned as ensigns in the U.S. Navy or second lieutenants in the U.S. Marine Corps and must serve on active duty for a minimum of four years.

## NROTC College Program

The Naval ROTC college program is offered for cadets who wish to earn commissions as Reserve officers in the U.S. Navy or Marine Corps. These Naval cadets may enroll in any academic major at The Citadel. College program students join the Naval Reserve during their junior year and must attend a minimum of one officer summer training cruise with pay. The Navy Department furnishes all Naval Science textbooks, provides an annual uniform allowance, and pays a monthly subsistence of at least $100 during the junior and senior years. Upon graduation, these Naval cadets are commissioned as ensigns in the U.S. Navy or second lieutenants in the U.S. Marine Corps and must serve on active duty a minimum of three years.

College program Naval cadets may compete in national competition for the Navy-Marine scholarship program and in addition are eligible for direct appointment to scholarship status by the Professor of Naval Science.

## Enrollment

To be eligible for enrollment in the NROTC programs one must:

—be a citizen of the United States.
—have reached the 17th anniversary of his birth by June 30 of the year enrolled.
—not have reached the 21st anniversary of his birth by June 30 of the year enrolled.
—be physically qualified.

Basic requirements are essentially the same as for commissioning in other programs. Defective vision must be correctable to 20/20 and waivers for color blindness may be considered.

Those cadets not qualified for formal enrollment in either the scholarship or college programs may participate in Naval Science for academic credit only. They will not be eligible for appointment to commissioned grade.

## Selection of Navy-Marine Option

Naval cadets may, upon matriculation, exercise an option and indicate a desire for commissions in the U.S. Navy or U.S. Marine Corps. This option must be exercised prior to the beginning of the junior year as the Navy and Marine curriculums become independent during the last two years. All candidates for the Marine-option must have the recommendation of the Marine officer instructor and the approval of the Professor of Naval Science.

## Naval Flight Instruction Program

Naval cadets who qualify may volunteer to take the flight instruction program either during their junior or senior year at The Citadel. The program consists of 70 hours of instruction (half ground school and half in flight training) leading to a private license given by a commercial aviation school. All expenses are paid by the Naval Service. The program is particularly designed for cadets who desire to become Navy or Marine Corps aviators.

### Summer Instruction

Naval ROTC college program cadets are required to perform one summer of training duty between the junior and senior years. The period of training is about six weeks. Candidates for commissions in the U.S. Naval Reserve normally will perform their training aboard operational ships of the U.S. Fleets. Candidates for U.S. Marine Corps Reserve commissions will perform their training at the U.S. Marine Corps Base, Quantico, Virginia. Transportation costs to and from the sites of training, subsistence and quarters in kind, and pay of approximately $397 for the six-week period will be paid to all participating students.

Navy-Marine scholarship program cadets are required to perform training of approximately six weeks during each of the three intervening summers. The first summer training is performed aboard operational ships of the fleet. The second summer, Naval cadets receive instruction in aviation and amphibious operations. During the third summer, candidates for U.S. Navy commissions will perform their training aboard operational ships serving as junior officers, and the candidates for U.S. Marine Corps commissions will perform their training at the U.S. Marine Corps Base, Quantico, Virginia. Transportation costs to and from sites of training, subsistence and quarters in kind, and pay of approximately $397 for the six-week period will be paid to all participating students.

### Summary of Estimated Naval ROTC Allowances

College Program:
- Fourth and third class years
    - $120 annual uniform allowance
- Second and first class years
    - $120 annual uniform allowance
    - $1,000 annual subsistence allowance
- Summer training
    - $397 (approximate) plus meals, quarters, and transportation

Navy-Marine Scholarship Program:

In addition to full payment of tuition, college fees, textbooks, and instructional supply fees, all Navy-Marine scholarship cadets receive the following annual payments:

$120 uniform allowance
$1,000 subsistence
$397 (approximate) summer training, meals, quarters, and transportation for training are also at Naval expense.

## AIR FORCE ROTC PROGRAM

The mission of The Citadel's Air Force ROTC detachment is to provide instruction, experience, and motivation to each cadet choosing the Air Force ROTC program and to insure that he possesses the knowledge, character, and qualities of leadership essential to his progressive development as a career officer and good citizen.

Modern weapons systems and technology in combination with a constantly changing world situation have removed the emphasis on "Reserve" from Air Force ROTC. The "Force-in-being" concept demands that the emphasis be on the dedicated career professional officer who accepts responsibility readily, thinks critically and creatively, and writes and speaks effectively. The Air Force ROTC program at The Citadal has become a major source for this kind of officer. Each year approximately one hundred cadets receive their Air Force commissions at The Citadel. During the past several years The Citadel commissioned more second lieutenants than any other AFROTC detachment in the United States.

Citadel graduates have served the Air Force and the nation well in both war and peace. Today's Citadel cadets can be expected to assume important command and managerial positions in the Air Force's aerospace force of the future.

### Four-Year Program

The four-year Air Force ROTC program, which is offered at The Citadel, serves as a major commissioning route for young men interested in becoming officers in the U. S. Air Force.

In the four-year program, the student enrolls in Air Force ROTC at the beginning of his freshman year, and during his first two years he pursues the General Military Course (GMC). This course presents the organization and mission of the U. S. military forces and their role in American defense policy.

At the end of sophomore year those cadets who are physically qualified, have maintained good academic class standing, and passed the Air Force Officers' Qualifying Test may apply for entry into the advanced portion of the program.

The selected cadet then enrolls in the Professional Officer Course (POC), the last two years of the Air Force ROTC curriculum. Included in his third year curriculum are studies of the development of air power in the United States; the mission and organization of the Department of Defense; Air Force concepts, doctrine, and employment; astronautics and space operations; and future development of aerospace power. The cadet attends a four-week field training course at an Air Force base, normally between his sophomore and junior years. The final year of the Professional Officer Course includes a study of professionalism, the military justice system, leadership in theory and practice, the principles and functions of management, and problem solving.

## Formal Enrollment Requirements

*General Military Course*

1. Being a citizen of the United States.
2. Being physically qualified. The most frequent disqualifying item is failure to meet vision standards. Some minimum acceptance vision standards are: Pilot, 20/20 uncorrected in both eyes; Navigator, 20/70 correctable to 20/20 in both eyes; Non-rated, 20/400 correctable to 20/30 in one eye and 20/40 in the other.
3. Maintaining satisfactory academic standards.
4. Having good moral character. (Convictions by civil or military court for offenses other than minor traffic violations are disqualifying; excessive minor traffic violations may also cause disqualification.)
5. Signing a certificate of loyalty to the United States Government.

*Professional Officer Course*

1. Completion of the General Military Course.
2. Passing the physical requirements.
3. Passing Air Force Officers' Qualification Test (AFOQT).
4. Contracting to serve on active duty for six years if qualified for pilot or navigator. Other categories are for four years.
5. Enlisting in the Enlisted Reserve of the Air Force for a specified

period of time. A cadet selected for the Professional Officer Course under this program who willfully evades the terms of his advanced course contract or who completes the course but declines to accept a commission when offered may be ordered to active duty by the Secretary of the Air Force to serve in his enlisted grade for a period not to exceed two or four years depending on whether or not the cadet is enrolled under the AFROTC scholarship program. Under the latter program enlisted service may extend to four years.

6. Maintaining satisfactory academic standards and graduating with class.

## Field Training

Normally during the summer between the sophomore and junior years, Citadel cadets enrolled in AFROTC are required to attend a four-week field training course at an Air Force base. To most cadets this is a memorable experience, for here the cadet gets a closeup look at Air Force life and realistic operations. Each cadet receives practical guidance in aircraft and aircrew indoctrination, small-arms familiarization, physical training, survival training, and career-officer orientation, as well as training in many other areas needed by the Air Force professional.

## Field Trips

The vast scope of the United States Air Force is difficult to portray in the classroom. In partial compensation, the Air Force ROTC detachment at The Citadel takes selected cadets to the Air Force—in the form of field trips to Air Force bases. On these trips the cadets receive briefings on base activities, observe firsthand Air Force operations, and, as a highlight, take an orientation ride in a large jet transport. The cadet returns to school with a more accurate perspective of the global nature of the organization in which he will serve. Experience has shown that these visits are of considerable value in developing a cadet's appreciation of the challenging Air Force officer's career that lies ahead.

## Uniform Allowance

Students formally enrolled in Aerospace Studies I and II are paid by the government $29 per semester as a uniform allowance. Fourthclassmen (freshmen) and thirdclassmen (sophomores) must be enrolled at least through the sixth week to receive this allowance. Students formally enrolled in the advanced course are paid $55 per semester as a uniform allowance. Uniform allowances are not paid directly to the students but are credited to their student accounts.

### Subsistence Pay

A cadet selected for the Professional Officer Course will be provided subsistence pay at the rate of $100 per month beginning on the day he starts advanced training and ending upon the completion of his instruction, but in no event shall any cadet receive such pay for more than 20 months.

### AFROTC College Scholarship Program

To attract top-quality students, Air Force ROTC is authorized to grant up to 6,500 scholarships, which give selected cadets full tuition, laboratory fees, incidental fees, and allowance for books. Additionally, they are paid a subsistence of $100 per month. Selections are made on the basis of the cadet's college grades and officer aptitudes as reflected by the Air Force Officers' Qualifying Test, demonstrated performance, and an interview by an Air Force panel. At the present time The Citadel has 57 AFROTC cadets receiving AFROTC college scholarships.

### Distinguished Air Force Students

The designation of Distinguished Air Force Students is limited to a small number of those Air Force cadets entering their senior year. This designation is made by the Professor of Aerospace Studies and is based on a careful appraisal of a candidate's qualities of leadership, loyalty, initiative, attitude, military bearing, and character. In addition, DAFS recipients must be in the top third of their ROTC classes, attain a favorable report on their summer camp activities, and be in the upper half of their classes.

### Air Force ROTC Distinguished Graduates

The Professor of Aerospace Studies may designate as Distinguished Graduates those seniors who possess outstanding qualities of leadership and have demonstrated those qualities both in their academic classwork and military activites. This designation is a factor that is considered for appointment in the Regular Air Force during the early years of the junior officer's career.

# Expenses

The Citadel, The Military College of South Carolina, is one of eight institutions of higher education supported by the State of South Carolina.

The cost of operation is underwritten through collection of fees from the students and appropriations made by the General Assembly of South Carolina. Nonresidents are required by law to pay a larger portion of the cost of their education than is required of residents of South Carolina. This differential is $650.

Colonel J. F. Bosch, Jr., Vice President for Business Affairs, is the chief business and fiscal officer of the institution. Major Bailey M. Morrow, Treasurer, is responsible for the collection of monies due The Citadel. All correspondence concerning fees, installments, and status of accounts should be directed to Major Morrow.

## Fees

The fees shown below in the Schedule of Payments are required to be paid by all students. The college reserves the right at any time to adjust fees to meet the current cost of operation should it become necessary.

## Payments

Beginning with the freshman class of September 1970, the four-installment plan was discontinued and one installment each semester was instituted. This change was felt necessary as one step in combating the rising cost of making collections and bookkeeping. Students who entered The Citadel under the four-installment plan will continue using it until their class graduates. The installments are due and payable as shown in the schedule below. Bills for the regular academic year will be sent to parents or guardians approximately one month prior to the date the installment is due. All remittances should be by money order or check, made payable to The Citadel and mailed to the Treasurer, The Citadel, Charleston, S. C. 29409.

Since summer and evening school fees are based upon the credit hours taken, it is impossible to pre-bill these fees. See page 73 for information on the summer and evening programs.

All fees are due and payable prior to the date of reporting to school for registration. This advance payment date is necessary for the smooth functioning of the preregistration procedure in effect at The Citadel.

In those instances where parents desire to finance the cost of their son's education on a monthly installment basis, arrangements for such plans may be made with either College Aid Plan or The Tuition Plan of New Hampshire, Inc. Details of these plans may be secured by writing directly to the Financial Aid Office at The Citadel. In any event, if loans are received from these instituitons or any other financial institution, arrangements should be made with the lending institution to have the payments received by The Citadel on the due dates specified in the schedule of payments.

## Late Payments

All college fees must be paid by the dates indicated in the schedule below. A penalty of $5 for the first day and $1 per day thereafter until all fees have been paid will be assessed each student for failure to pay any installment on the date it is due. Also, under the college regulations, failure to pay an installment or any part thereof subjects the student to being dropped from enrollment at The Citadel.

## Schedule of Payments for Freshman Students

| *Date Due* | South Carolina Residents | Out-of-State Residents |
|---|---|---|
| †Reservation Fee | | |
| Fifteen Days After Notice of Acceptance | $ 50.00 | $ 50.00 |
| First Semester Fees - 8/14/72 | $1,535.00§ | $1,860.00 |
| Second Semester Fees - 1/10/73 | 875.00 | 1,200.00 |
| Total Academic Year | $2,410.00 | $3,060.00 |

## Schedule of Payments for Sophomore Students

| *Date Due* | South Carolina Residents | Out-of-State Residents |
|---|---|---|
| †Reservation Fee | | |
| On or Before June 15 | $ 50.00 | $ 50.00 |
| First Semester Fees - 8/21/72 | $ 937.50 | $1,262.50 |
| Second Semester Fees - 1/10/73 | 937.50 | 1,262.50 |
| Total Academic Year | $1,875.00 | $2,525.00 |

†See footnote 1 on page 59.
§See footnote 2 on page 59.

## Schedule of Payments for Junior Students

| *Date Due* | **South Carolina Residents** | **Out-of-State Residents** |
|---|---|---|
| †Reservation Fee<br>On or Before June 15 | $ 50.00 | $ 50.00 |
| First Semester Fees - 8/21/72 | $ 900.00 | $1,225.00 |
| Second Semester Fees - 1/10/73 | 900.00 | 1,225.00 |
| Total Academic Year | $1,800.00 | $2,450.00 |

†See footnote 1 on page 59.
§See footnote 2 on page 59.

## Schedule of Payments for South Carolina Residents

| *Due Date* | *Seniors* |
|---|---|
| †Reservation Fee: | |
| On or Before June 15 | $ 50.00 |
| First Semester Fees: | |
| 1st Installment - 8/21/72 | $ 626.25 |
| 2nd Installment - 10/16/72 | $ 373.75 |
| Total First Semester Fees | $1,000.00 |
| Second Semester Fees: | |
| 3rd Installment - 1/10/73 | $ 401.25 |
| 4th Installment - 3/15/73 | $ 373.75 |
| Total Second Semester Fees: | $ 775.00 |
| Total Academic Year | $1,775.00 |

†See footnote 1 on page 59.

## Schedule of Payments for Out-of-State Residents

| *Due Date* | *Seniors* |
|---|---|
| †Reservation Fee: | |
| On or Before June 15 | $ 50.00 |
| First Semester Fees: | |
| 1st Installment - 8/21/72 | $ 788.75 |
| 2nd Installment - 10/16/72 | $ 536.25 |
| Total First Semester Fees | $1,325.00 |

| | |
|---|---|
| Second Semester Fees: | |
| 3rd Installment - 1/10/73 | $ 563.75 |
| 4th Installment - 3/15/73 | $ 536.25 |
| Total Second Semester Fees: | $1,100.00 |
| Total Academic Year | $2,425.00 |

†See footnote 1 on page 59.

### Summary of Expenses for South Carolina Students

| Fees: | *Freshmen* | *Sophomores* | *Juniors* | *Seniors* |
|---|---|---|---|---|
| Registration Fee | $ 10.00 | $ 10.00 | $ 10.00 | $ 10.00 |
| Tuition Fee | 135.00 | 135.00 | 135.00 | 135.00 |
| College Fee | 435.00 | 435.00 | 435.00 | 435.00 |
| Auxiliary Services | 970.00 | 970.00 | 970.00 | 970.00 |
| Total Fees | $1,550.00 | $1,550.00 | $1,550.00 | $1,550.00 |
| Deposits: | | | | |
| Deposit for Books, Supplies, Uniforms, and Accessories | $ 850.00§ | $ 325.00 | $ 250.00 | $ 225.00 |
| Breakage | 10.00 | — | — | — |
| Total Deposits | $ 860.00 | $ 325.00 | $ 250.00 | 225.00 |
| Total Expenses for South Carolina Students | $2,410.00 | $1,875.00 | $1,800.00 | $1,775.00 |

§See footnote 2.

### Summary of Expenses for Out-of-State Students

| Fees: | *Freshmen* | *Sophomores* | *Juniors* | *Seniors* |
|---|---|---|---|---|
| Registration Fee | $ 10.00 | $ 10.00 | $ 10.00 | $ 10.00 |
| Tuition Fee | 385.00 | 385.00 | 385.00 | 385.00 |
| College Fee | 835.00 | 835.00 | 835.00 | 835.00 |
| Auxiliary Services | 970.00 | 970.00 | 970.00 | 970.00 |
| Total Fees | $2,200.00 | $2,200.00 | $2,200.00 | $2,200.00 |
| Deposits: | | | | |
| Deposit for Books, Supplies, Uniforms, and Accessories | $ 850.00§ | $ 325.00 | $ 250.00 | $ 225.00 |
| Breakage | 10.00 | — | — | — |
| Total Deposits | $ 860.00 | $ 325.00 | $ 250.00 | 225.00 |
| Total Expenses for Out-of-State Students | $3,060.00 | $2,525.00 | $2,450.00 | $2,425.00 |

§See footnote 2.

## Footnotes on Schedules of Payments and Expenses

† 1. The reservation fee of $50 will be credited to the first installment of the first semester.

§ 2. An additional deposit of $75 is required of freshman students who elect engineering drawing.

## Explanation of Fees

*Reservation Fee:* A reservation fee of $50 is required of all cadets. This fee is not an additional charge but is an advance payment toward the fees due for the fall semester. It assures a cadet a place in the Corps of Cadets and barracks for the following September.

All new cadets are required to pay this fee within 15 days after notice of acceptance has been received from the Registrar.

A cadet currently enrolled who plans to continue his education at The Citadel is also required to pay the reservation fee not later than June 15 for the fall semester. If this fee is not paid by June 15, The Citadel is in no way obligated to permit him to continue his education at The Citadel.

The reservation fee will be refunded to old students who notify the Registrar in writing not later than June 15 to cancel their reservations at The Citadel. After June 15 but prior to registration for the fall semester, this fee will be refunded only to those upperclassmen (sophomores, juniors, and seniors) who have been dropped from enrollment at The Citadel due to academic deficiencies or other causes.

Those students who complete registration for the fall semester will receive credit on the first installment for the reservation fee previously paid.

*Tuition* — The Board of Visitors of The Citadel has established the following tuition fees:

*South Carolina Students* — For all students whose guardians or parents reside in South Carolina the tuition fee has been established at $135 per academic year or $67.50 per semester.

*Out-of-State Students* — All students whose guardians or parents are nonresidents of South Carolina will pay an out-of-state tuition fee.

The out-of-state tuition fee has been established at $385 per academic year or $192.50 per semester.

*College Fee* — A college fee of $435 is assessed South Carolina students and $835 for out-of-state students per academic year. This fee is used in the support of the library, general overhead and maintenance of the college, and student activities. That portion of the fee going to the student activities is used in the support of student publications and organizations such as *The Sphinx,* student annual; *The Brigadier,* college newspaper; *The Shako,* literary magazine; *The Guidon,* an information and orientation handbook; religious activities; social functions, including dances; and intramural program and athletics. That portion of the fee for athletics is not an admission fee to athletic contests, since students are admitted to all athletic games free of charge.

*Auxiliary Services Fee* — A fee of $970 per academic year is assessed each student to cover room, board, laundry, normal hospital care, and haircuts. For the purpose of loan applications, room and board should be shown as $735 with the balance of $235 covering laundry, hospital, and haircuts.

Due to many uncontrollable factors, the college reserves the right to increase this fee at any time to meet current increases in the cost of operation. This fee is refundable on a pro-rated basis upon withdrawal from school.

*Breakage* — A $10 deposit will be maintained by all cadets enrolled at The Citadel. When there is insufficient money in the cadet's account to cover the cost of damages to buildings, rooms, equipment, or loss of ROTC manuals and government property, this deposit will be used. It is refundable after graduation or withdrawal from The Citadel.

*Deposit for Books, Supplies, Uniforms, and Accessories* — Each student is required to deposit funds to his account to cover the cost of books, supplies, uniforms, accessories, alterations to uniforms, purchase of dry cleaning and pressing tickets, laboratory fees, engineering drawing equipment and supplies, and other miscellaneous expenses relevant to his studies or attendance at The Citadel. The amount expended by each student varies according to the individual's needs. The amount of the deposit has been based upon the average needs. In most cases this amount is ample. However, if the needs of a student should exceed the deposit, additional funds will have to be deposited to his account.

The required deposits are as follows:

| | |
|---|---|
| Freshmen | $850.00 |
| Additional deposit for freshmen engineering students (Students who elect engineering drawing will be provided a supplementary bill for this deposit to cover the purchase of drawing instruments and supplies.) | $ 75.00 |
| Sophomores | $325.00 |
| Juniors | $250.00 |
| Seniors | $225.00 |

*Uniforms* — All cadets are required to wear The Citadel uniform which is issued by the college. New cadets should not bring a supply of civilian clothes other than those which are worn upon reporting to the college as they are not permitted to wear civilian clothes except during authorized furloughs.

Cost of uniforms should not be considered as an educational expense but rather a clothing expense which is incidental to attending any college. With proper care, the uniform should last for several years. Of course, the requirements during the subsequent years will depend on the manner in which the cadet has cared for his uniform. The overall cost of the uniform should not exceed that which would be incurred in purchasing clothes to attend a civilian college.

The woolen uniforms issued to cadets are custom-made for The Citadel. Once the uniforms have been fitted and issued to a cadet the entire cost will be charged to him.

Since the uniforms are tailor-made to the measurements of each cadet after enrolling at The Citadel, every cadet withdrawing from the college will be charged a cancellation fee for canceling the purchase of uniforms manufactured or fitted to him.

The cost of articles and uniforms issued to the freshman during the 1971-72 academic year was as follows:

| *Quantity* | *Article* | *Cost* |
|---|---|---|
| 1 | Bed spread, Citadel | $ 9.45 |
| 1 | Blanket, Citadel | 8.45 |
| 1 | Blouse, dress wool | 64.05 |
| 1 | Blouse, full dress, wool | 82.35 |
| 1 | Cap, dress | 9.20 |
| 1 | Field cap | 2.60 |
| 1 | Cap, white with covers | 7.50 |
| 1 | Coat, overcoat, wool | 71.15 |
| 1 | Coat, rain | 29.25 |
| 2 | Coat, white and accessories | 46.25 |
| 4 | Cuffs, pairs, at $.65 | 2.60 |
| 2 | Covers, mattress, at $3.40 | 6.80 |
| 2 | Gloves, pairs, dance, at $.85 | 1.70 |
| 6 | Gloves, pairs, drill, at $1.15 | 6.90 |
| 1 | Gloves, pair, leather | 5.25 |
| 1 | Jacket, grey | 20.90 |
| 2 | Pads, mattress, at $3.65 | 7.30 |
| 1 | Muffler | 1.20 |

| | | |
|---|---|---|
| 1 | Shako, with pompon, chair, etc. | 16.85 |
| 6 | Shirts, grey cotton, at $4.25 | 25.50 |
| 6 | Shirts, grey cotton, short sleeve, at $3.55 | 21.30 |
| 2 | Shirts, athletic at $1.35 | 2.70 |
| 2 | Shorts, athletic, at $1.25 | 2.50 |
| 1 | Suit, sweat | 3.90 |
| 10 | Trousers, grey cotton, at $4.10 | 41.00 |
| 2 | Trousers, white, regular, at $9.75 | 19.50 |
| 2 | Trousers, white, full dress, at $9.50 | 19.00 |
| 2 | Trousers, dress, wool, at $26.70 | 53.40 |
| 1 | Trousers, full dress, wool | 27.05 |
| 3 | Laundry bags at $.95 | 2.85 |
| 1 | Bathrobe | 7.50 |
| | | $625.95 |

Miscellaneous Items:

| | |
|---|---|
| 1 belt w/2 bkle; 2 belt tips; 8 collars, white, 1 cover cap, rain; 1 cuff links, pair; 2 letters, company; name tags; 2 numerals, class; 2 neckties; 1 plate, breast; 1 plate, waist; 1 supply kit; 1 suspenders, white; 1 t pins, box; 1 webbing, roll; rentals, cartridge box or music pouch; 10 hangers; 1 lock; 1 desk pad, complete; 1 paper, white, ream; 1 paper, yellow, ream | 35.31 |
| Total | $661.26 |
| S. C. sales tax | 26.45 |
| | $687.71 |

The prices above were in effect during the 1971-72 academic year and are subject to changes in accordance with the contract prices at the time of purchase by the cadets. Extra shirts, trousers, or other articles of uniform in excess of the above quantities are not included in the required deposit. Additional deposits will have to be made if extra shirts, trousers, or other articles of uniform are desired.

Cadets in the second class (juniors) will be issued four cotton shirts during the first semester.

In order to keep the appearance of the Corps of Cadets at the highest level, an inspection will be made of the articles of uniform of members of the third (sophomores), second (juniors), and first (seniors) classes. If the uniforms do not meet the minimum requirements of appearance, the individual will be required to purchase a replacement for the unserviceable item of uniform. In order to keep the cost to a minimum, a new or used uniform may be purchased depending upon the desires of the cadet.

*Diploma Fee* — The charge for the diploma is $10.

*Transcript Fee* — Official transcripts of scholastic records will be furnished upon request. There is no charge for the initial transcript but a fee of $3 is charged on all subsequent ones. Remittances for transcripts should accompany the application for the transcript and should be mailed directly to the Registrar.

*Laboratory Fee* — A laboratory fee of $10 a semester is charged students taking courses involving laboratory work in biology, chemistry, civil engineering, electrical engineering, geology, modern languages, and physics. These laboratory fees are used to cover the added expense of supplies and costly equipment used in the teaching of these courses. This fee is not collected but is included in the estimated deposit for books and supplies, and is chargeable against the deposit.

A laboratory fee of $5 a semester is charged to students of the junior and senior classes majoring in physical education. A fee of $2 a semester is charged to students in business statistics and senior accounting.

A laboratory fee of $10 is charged to students taking any computer course.

All students are required to participate in the physical fitness and intramural programs. To support these programs the following fees are charged each semester: freshmen $5, sophomores $2.50, juniors $1.25, seniors $1.25.

## Refunds

The Citadel is committed to many expenses based upon the anticipated enrollment at the beginning of each term. Registration at The Citadel is considered to be a contract binding the student and his parent or guardian to charges for the entire term.

However, students who withdraw during a term may receive partial refunds based on the length of attendance. Refunds will be computed from registration date until withdrawal date as determined by the Registrar.

Authorized refunds are as follows:

Tuition and Colleges Fees

| *Length of enrollment* | *Installments* |
|---|---|
| less than one week | 80% |
| one to two weeks | 60% |
| two to three weeks | 40% |
| three to four weeks | 20% |
| after four weeks | none |

Auxiliary services:

These fees will be refunded on a pro-rated basis except the cost of haircut tickets, which will be made as follows:

The charge for haircuts is made in order to provide each cadet with a means to insure that he will be able to get a reasonable number of haircuts to maintain proper standards of good military appearance. The ticket issue, in books, is the basis for a system whereby the individual barber may be paid in direct relation to the amount of work he does (number of haircuts).

Refunds for unused haircut tickets will be made only to cadets withdrawing or graduating from The Citadel. All refunds are made through The Citadel Canteen upon presentation of the unused tickets. A freshman upon withdrawing during the school year will be refunded the value of the unused tickets issued to him during the school year. Upon graduation a senior will be permitted a refund on his unused haircut tickets up to 10 percent of the number of tickets issued to him during his attendance at The Citadel. Loose tickets will not be accepted.

Deposits for Uniforms, Books, and Supplies

The unused portion of the deposit to the student's account for books, supplies, uniforms, and accessories will be refunded. Since this deposit is estimated to cover the needs of the student for such purchases during the entire academic year, it should not be expected that the school refund this money during the year to the cadet, veteran, or special student for his personal needs.

The unexpended balance of the deposit will be returned upon request at the close of the academic year; otherwise, it will be held to the student's credit until the next academic year, or until he withdraws or graduates from The Citadel.

Refunds will be mailed approximately 30 days after discharge or graduation.

## Monthly Statement of Student's Account

A monthly statement is furnished each student. It is incumbent upon the student to verify each charge or credit made to his account. After he has verified the charges and credits, he should forward the statement to his parent or guardian for their information. If the student's account is overdrawn, he should go to the Treasurer's office to determine if he should make an additional deposit.

## Additional Information

*Unsatisfactory Accounts* — When a student's account is in an unsatisfactory condition, no honorable discharge will be made, no diploma will be awarded, and no transcript of credits will provided until he has made a satisfactory settlement of the account.

*Pocket Money* — The college does not handle pocket-money accounts. All allowances for pocket money should be sent directly to the cadet. No estimate is made of this requirement, for the amount varies among the cadets and can best be determined by them and their parents.

Cadets who receive substantial allowances for their personal needs should deposit this money in The Citadel Depository, which is maintained for the accommodation and convenience of the cadets. This depository is located in the Treasurer's office in Bond Hall.

## Clothing and Bedding

All cadets are required to furnish their own bedclothes except a bedspread and blanket which will be issued to each cadet. Both the bedspread and the blanket are in Citadel colors and have The Citadel seal imprinted thereon. These items can be used after graduation on single beds.

Beds and mattresses are provided by the college, but pillows are not. Two mattress covers will be issued at cost to each cadet. Cadets *must* come provided with the following articles:

Three pajamas
Twelve white tee shirts and twelve short drawers
Twelve pairs of black socks
Four pairs of white athletic socks
One pair of white tennis shoes
Ten white towels
One pillow
Three white pillow cases
Twelve white handkerchiefs
One pair of bedroom slippers or shower shoes
Two pairs of plain toe black oxford shoes (with rubber heels)
One Army-style blanket for single bed
Toilet articles
Four white sheets for single bed

Since the college does not furnish bed linens, it is advisable that each cadet who ships his belongings to The Citadel bring with him two sheets, one pillow case, and one pillow for his use until he is able to get access to his belongings.

New cadets are advised to break in their cadet uniform shoes at least three weeks prior to reporting to The Citadel.

Before the opening of the first semester a new cadet is assigned an identification number, which he retains as long as he remains at The Citadel. This five-digit number will be used by the cadet as an identification number and as his laundry number. All clothing should be marked with his name and full initials, as well as the identification number, as follows: sheets, towels, and handerkerchiefs, in the corner; pillow cases, in the corner at open end; collars, on inside near center; shirts, on bands at back of neck; socks, on leg near top; other articles, where most practicable.

## Luggage

It is advisable to bring inexpensive trunks and suitcases since it is not permissible to retain them in the cadet's room. Luggage must be stored in a warehouse provided for such at the risk of the owner. One piece (overnight bag) necessary for weekend or athletic trips may be kept in the cadet's room.

Luggage stored in the warehouse should be removed by the cadet upon withdrawing or graduating from The Citadel. If it is necessary to ship luggage home, shipment will be COD. The Citadel reserves the right to dispose of all unclaimed luggage remaining in the warehouse one year after a cadet has withdrawn or graduated.

Luggage sent by commercial transportation should be clearly identified with name of the cadet and shipped to The Citadel, Supply and Property Officer, Central Warehouse, Charleston, S. C. 29409.

The Supply and Property Officer should be notified in advance of the shipment. Upon receipt, the luggage will be placed in the cadet's barracks.

## Accommodations for Cadets During Holidays

Cadets who cannot go to their homes during the Christmas and Easter holidays may remain on the campus and occupy the visiting teams' dormitory. The barracks and the dining hall will be closed during vacations.

## Employment

The time of a cadet at The Citadel is so taken up with his duties that there is no opportunity for outside employment for the purpose of financial assistance. However, there are a limited number of part-time jobs available from time to time with various campus activities. These jobs are not of a substantial nature which can be relied upon to pay a cadet's college fees. To be eligible for such work a cadet must be an upperclassman and must be proficient in both his academic work and conduct.

## Hospital

The hospital facilities at The Citadel are excellent, and all ordinary cases of sickness are treated by the surgeon and the nurses of the college without expense to the parent. Surgical cases requiring the removal of a cadet to an infirmary in the city, services of a special nurse in the college hospital, and special treatment of eyes, ears, teeth, etc., must be at the expense of the parents or guardian.

The cost of special medical supplies or prescriptions will be charged to the student account.

## Hospital Group Insurance

The Citadel has made arrangements with a private insurance company for a group hospitalization program available to all cadets and veteran students on a voluntary basis. The particulars of this program are provided the parents or guardians and veteran students prior to each school year. This program is approved by The Citadel and operated by the private insurance agency.

## Army ROTC Allowances

Students formally enrolled (see page 44 for particulars) in Military Science I and II are paid by the government $31 per semester as a uniform allowance. Fourthclassmen (freshmen) and thirdclassmen (sophomores) must be enrolled at least through the sixth week to receive this allowance. Students formally enrolled in the advanced course are paid $47.50 per semester as a uniform allowance. Uniform allowances are not paid directly to the students but are credited to the student's account when received from the Army.

In addition to the uniform allowance a subsistence allowance of $100 per month is paid directly to those students under contract in the advanced course and to all scholarship cadets.

Students formally enrolled in Army ROTC must attend summer camp between their junior and senior years. At this camp students receive the pay rate of $265.35 per month while attending, plus travel pay to and from camp computed at a rate of six cents per mile. During the camp period the subsistence allowance is not paid.

## Summary of Estimated Army ROTC Allowances

| | | |
|---|---|---|
| Fourth Class Year (freshmen—formally enrolled) | | |
| Commutation of Uniform Allowance*** | | $ 62.00 |
| | TOTAL | $ 62.00 |
| Third Class Year (sophomores—formally enrolled) | | |
| Commutation of Uniform Allowance*** | | $ 62.00 |
| | TOTAL | $ 62.00 |
| Second Class Year (juniors—formally enrolled) | | |
| Commutation of Uniform Allowance** | | $ 95.00 |
| Subsistence Allowance (estimate)* | | $1,000.00 |
| | TOTAL | $1,095.00 |
| First Class Year (seniors—formally enrolled) | | |
| Commutation of Uniform Allowance** | | $ 95.00 |
| Subsistence Allowance (estimate)* | | $1,000.00 |
| | TOTAL | $1,095.00 |
| Summer Camp (six weeks) (taxable) | | $ 397.00 |

*Subsistence Allowance: Paid at the rate of $100 per month (paid only while under contract or scholarship).

**To scholarship and contract cadets only.

***To Army cadets (formally enrolled)

## Navy ROTC Allowances

Students formally enrolled in the Naval ROTC college program are provided financial and other assistance throughout all four years of the program. During the fourth and third class years, each student is provided textbooks to support the Naval Science studies and a uniform commutation allowance. The uniform commutation allowance is not paid to the student directly but is credited to his account. During the second and first class years, a monthly subsistence of $100 is paid for a period not to exceed 10 months for each year. All NROTC college program students are required to participate in summer training of six weeks between the second and first class years and receive subsistence and quarters in kind and pay of approximately $265 a month.

## Summary of Estimate of NROTC Allowances (NROTC College Program)

| | | |
|---|---|---|
| Fourth Class Year (freshmen—formally enrolled) | | |
| Commutation of Uniform Allowance | | $ 120.00 |
| | TOTAL | $ 120.00 |

| | | |
|---|---|---|
| Third Class Year (sophomores—formally enrolled) | | |
| Commutation of Uniform Allowance | | $ 120.00 |
| | TOTAL | $ 120.00 |
| Second Class Year (juniors) | | |
| Commutation of Uniform Allowance | | $ 120.00 |
| Subsistence Allowance (approximately) | | $1,000.00 |
| | TOTAL | $1,120.00 |
| First Class Year (seniors) | | |
| Commutation of Uniform Allowance | | $ 120.00 |
| Subsistence Allowance (approximately) | | $1,000.00 |
| | TOTAL | $1,120.00 |

Summer Training

While actually under instruction, approximately $397.00 for six weeks (taxable)

Transportation and meals to and from site of training provided by the Navy.

### Air Force ROTC Allowances

Students formally enrolled (see page 50 for particulars) in Aerospace Studies receive allowances for uniforms, subsistence, and field training attendance. The commutation of uniform allowance is not paid directly to the student but is credited to the student's account. The subsistence allowance of $100 per month is paid directly to all Air Force scholarship cadets and to those cadets enrolled as members of the Professional Officer Course (POC) during the junior and senior year. In addition, students who are designated applicants for membership in the POC attend Air Force field training between the sophomore and junior year and are paid $265.35 for field training attendance in lieu of the $100.00 per month subsistence allowance. Students attending field training are also paid a travel allowance, to and from the field training site, at the rate of six cents per mile.

### Summary of Estimated Air Force ROTC Allowances

| | | |
|---|---|---|
| Fourth Class Year (freshmen—formally enrolled) | | |
| Commutation of Uniform Allowance | | $ 58.00 |
| | TOTAL | $ 58.00 |

| | | |
|---|---|---|
| Third Class Year (sophomores—formally enrolled) | | |
| Commutation of Uniform Allowance | | $ 58.00 |
| | TOTAL | $ 58.00 |
| Second Class Year (juniors—members of the POC) | | |
| Commutation of Uniform Allowance | | $ 110.00 |
| Subsistence Allowance (approximately) | | $ 950.00 |
| | TOTAL | $1,060.00 |
| First Class Year (seniors—members of the POC) | | |
| Commutation of Uniform Allowance | | $ 110.00 |
| Subsistence Allowance (approximately) | | $ 950.00 |
| | TOTAL | $1,060.00 |
| Field Training | | |
| Air Force ROTC cadets (four weeks) (taxable) | | $ 265.35 |
| Travel—six cents a mile to and from camp. | | |

**Payments Under the Army, Navy, and Air Force Scholarship Programs**

Under the Army, Navy, and Air Force scholarship programs, The Citadel receives directly from the Federal government payment for the registration fee, tuition fee, college fees, and hospital fee valued at $630 for South Carolina students and $1,280 for out-of-state students.

The schedule of payments of these ROTC scholarship students is as follows:

**South Carolina Students**

| | **Total** | **Amount Paid By Government** | **Amount Paid By Student** |
|---|---|---|---|
| FRESHMEN | | | |
| First Installment | $1,535.00 | $ 315.00 | $1,220.00 |
| Second Installment | 875.00 | 315.00 | 560.00 |
| Total | $2,410.00 | $ 630.00 | $1,780.00 |
| SOPHOMORES | | | |
| First Installment | $ 937.50 | $ 315.00 | $ 622.50 |
| Second Installment | 937.50 | 315.00 | 622.50 |
| Total | $1,875.00 | $ 630.00 | $1,245.00 |
| JUNIORS | | | |
| First Installment | $ 900.00 | $ 315.00 | $ 585.00 |
| Second Installment | 900.00 | 315.00 | 585.00 |
| Total | $1,800.00 | $ 630.00 | $1,170.00 |

| | | | |
|---|---|---|---|
| SENIORS | | | |
| First Installment | $ 626.25 | $ 160.00 | $ 466.25 |
| Second Installment | 373.75 | 155.00 | 218.75 |
| Third Installment | 401.25 | 160.00 | 241.25 |
| Fourth Installment | 373.75 | 155.00 | 218.75 |
| Total | $1,775.00 | $ 630.00 | $1,145.00 |

### Out-of-State Students

| | Total | Amount Paid By Government | Amount Paid By Student |
|---|---|---|---|
| FRESHMEN | | | |
| First Installment | $1,860.00 | $ 640.00 | $1,220.00 |
| Second Installment | 1,200.00 | 640.00 | 560.00 |
| Total | $3,060.00 | $1,280.00 | $1,780.00 |
| SOPHOMORES | | | |
| First Installment | $1,262.50 | $ 640.00 | $ 622.50 |
| Second Installment | 1,262.50 | 640.00 | 622.50 |
| Total | $2,525.00 | $1,280.00 | $1,245.00 |
| JUNIORS | | | |
| First Installment | $1,225.00 | $ 640.00 | $ 585.00 |
| Second Installment | 1,225.00 | 640.00 | 585.00 |
| Total | $2,450.00 | $1,280.00 | $1,170.00 |
| SENIORS | | | |
| First Installment | $ 788.75 | $ 322.50 | $ 466.25 |
| Second Installment | 536.25 | 317.50 | 218.75 |
| Third Installment | 563.75 | 322.50 | 241.25 |
| Fourth Installment | 536.25 | 317.50 | 218.75 |
| Total | $2,425.00 | $1,280.00 | $1,145.00 |

Additional items of cost are paid under the ROTC scholarship program as follows: when applicable, laboratory fees are billed to the government and when the money has been received, it is credited to cadet's account. The Army, Navy, and Air Force each pay up to $50 per semester for books purchased. The government is billed and the payment for the books purchased is made directly to the cadet. The subsistence allowance of $100 per month is also paid directly to the cadet by the Army, Navy, or Air Force. Since these allowances are paid directly to the cadet, deductions cannot be allowed against the payments due The Citadel for board or book deposits included in the Schedule of Payments.

Any excess funds in a cadet's account which has been generated by credits from the ROTC scholarship may be refunded to the parent upon request, or it may be left toward payment of fees for the next year, or any excess purchases that may be needed.

## Special and Veteran Students

Upon request, certain cadets who have completed their four years of military requirements but lack a few hours of credit for graduation may be granted the privilege of completing their work at The Citadel, as special students. Certified veterans are also permitted to attend as day students.

The use of The Citadel infirmary is available to both veteran and special students upon payment of the prescribed semester hospital fee, or in accordance with the published schedule of individual visit rates.

The schedule of payment for both special and veteran students is as follows:

### Schedule of Payments for South Carolina Students

| **Fees:** | | **Payment Due 8/21/72** | **Payment Due 10/16/72** | **Payment Due 1/10/73** | **Payment Due 3/15/73** |
|---|---|---|---|---|---|
| Registration Fee | $ 10.00 | $ 5.00 | $ | $ 5.00 | $ |
| Tuition | 135.00 | 33.75 | 33.75 | 33.75 | 33.75 |
| College Fee | 435.00 | 108.75 | 108.75 | 108.75 | 108.75 |
| Book and Supply Deposit | 125.00 | 62.50 | | 62.50 | |
| Total | $705.00 | $210.00 | $142.50 | $210.00 | $142.50 |

### Schedule of Payments for Out-of-State Students

| **Fees:** | | **Payment Due 8/21/72** | **Payment Due 10/16/72** | **Payment Due 1/10/73** | **Payment Due 3/15/73** |
|---|---|---|---|---|---|
| Registration Fee | $ 10.00 | $ 5.00 | $ | $ 5.00 | $ |
| Tuition | 385.00 | 96.25 | 96.25 | 96.25 | 96.25 |
| College Fee | 835.00 | 208.75 | 208.75 | 208.75 | 208.75 |
| Book and Supply Deposit | 125.00 | 62.50 | | 62.50 | |
| Total | $1,355.00 | $372.50 | $305.00 | $372.50 | $305.00 |

## Summer Session

A summer session is conducted for students who wish to accelerate their work or to make up conditions or failures.

The summer session must be self-supporting, and the same fees must be charged to both South Carolina and out-of-state students. Fees for the summer session are as follows:

| | *First Term* | *Second Term* |
|---|---|---|
| Tuition—$18 per semester credit hour | ............ | ............ |
| Summer Term Fee | $ 20.00 | $ 20.00 |
| Room, Board, and Laundry | 156.00 | 130.00 |
| Laboratory—for laboratory courses in biology, chemistry, and physics | 10.00 | 10.00 |

During the summer session all purchases of books and supplies will be on a cash basis. There will be no charging to the student's account since no book or supply deposits will be collected.

Bills for the summer session will not be sent to the parents by the Treasurer. It is impossible for the Treasurer to compute these bills since the tuition fee is based on the number of credit hours of work scheduled by the student. The student should come supplied with sufficient cash to take care of his fees for the summer session. Details of the summer school program may be had by obtaining a copy of the Summer School Bulletin from the Registrar.

## Evening College Program

The Citadel has established an evening program of college courses leading to a baccalaureate degree and designed to meet the needs of individuals who are interested in continuing their college education, who need more formal education, or who desire education for the purpose of broadening their cultural, business, professional, or avocational interest.

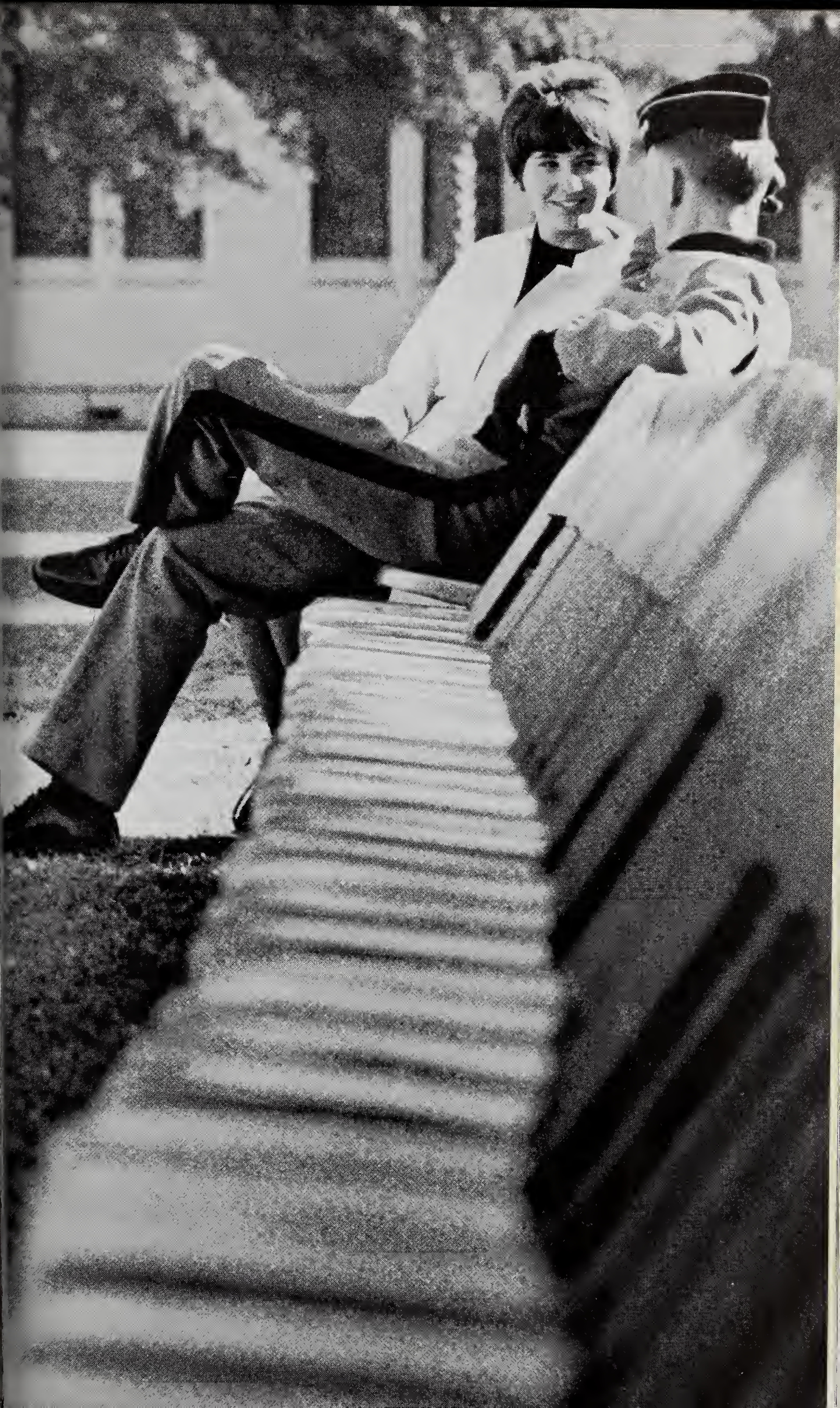
The program maintains the same academic standards that prevail in the regular program. All courses, unless specified otherwise, carry full college credits. The content of all courses is the same as that presented during the regular college session. Courses are under the jurisdiction of the regular academic department heads.

High-school graduates and present or former students in good standing with accredited institutions of higher learning are eligible for admission to the evening program.

A tuition fee of $20 per semester hour is charged for all credit courses. The fee for auditing a course is $10 for a semester hour. A laboratory fee of $10 per semester is charged for all science courses which have laboratory periods and for language courses using the language laboratory.

Courses will be offered during two semesters. The fall semester is from September to December and the spring semester from January to May.

For further information write Director, Evening Program, The Citadel, Charleston, S. C. 29409.



# Financial Aid

## Scholarships

Beginning with the fall term of 1972, several Citadel scholarships will be available. Each year some of these are given to cadets entering The Citadel for the first time; others are awarded to cadets presently in the college, based on accomplishments in the Corps both academically and militarily. The scholarships listed below fall under four categories:

Category I —Authorized by the Scholarship Board of Trustees of the Board of Visitors and selected by The Citadel Scholarship Committee.
Category II —Authorized by the Scholarship Board of Trustees of Association of Citadel Men and selected by The Citadel Scholarship Committee.
Category III —Authorized by the President of the college and selected by The Citadel Scholarship Committee.
Category IV —Given by individuals or companies directly to recipients without any selection by The Citadel Scholarship Committee.

The Citadel assumes the responsibility for awards given under the first three categories. Listed below are some of the current scholarships:

### Category I

*The Joseph D. Aiken Scholarships* cover all expenses, as outlined in the catalogue, for the first three years and are supported by a trust fund made possible by a bequest of the late Joseph D. Aiken. It is anticipated that several scholarships will be available each year, but they are limited to applicants from the New England states, with some preference being given Rhode Island and Connecticut residents.

*The Major James W. Ayers Scholarship* is in memory of Major Ayers, Class of 1957, who lost his life in the service of his country in Vietnam. It is given to an entering freshman, with preference to one interested in becoming a member of the United States Marine Corps upon graduation. The value is $400 a year for four years.

*Baruch Scholarships,* with a value of $400 each for one year, were inaugurated from the income of a fund donated to The Citadel by Mr. Bernard Baruch.

*The Alton H. Bryant Memorial Scholarship* is worth $800 a year for four years. It is in memory of Alton H. Bryant, a graduate of the Class of 1940, who lost his life in the service of his country. Applicants are limited to residents of Orangeburg County, South Carolina.

*The Richard P. Cardwell Scholarship* was established by General and Mrs. Eugene F. Cardwell in memory of their son, Cadet Richard P. Cardwell, a member of the Class of 1957. It is given in alternate years to a member of the sophomore class and has a value of $400 for one year.

*The Carrigg Scholarships* were established by a bequest to The Citadel and have a value of $800 a year for four years.

*The Frank W. Cayce Memorial Scholarships* are four-year scholarships and pay $800 per year. These scholarships were made possible by his grandmother, the late Mrs. Zulale J. Dowling, who bequeathed to The Citadel her entire estate for the purpose of establishing an educational scholarship fund in memory of her grandson, Cadet Frank W. Cayce.

*The Crouch-Lee Scholarship* has a present value of $400 a year for four years. The James R. Crouch award was founded in 1925 by the late James R. Crouch of Greenville, South Carolina. The William States Lee Scholarship was founded the same year by the late William States Lee of Charlotte, North Carolina. The deeds provided that the beneficiary shall be limited to a resident of South Carolina.

*The Daniel Scholarships* are derived from the income of a fund donated to The Citadel by R. Hugh Daniel and his brother, the late Charles E. Daniel. These scholarships range in value from $400 for one year to all expenses for four years.

*The Thomas Holland Evans Memorial Scholarship* was established by Mr. and Mrs. Thomas Evans in memory of their son, Lieutenant Thomas Holland Evans, Class of 1968, who lost his life while in the service of his country. It is given to an entering freshman, with financial need as a major requisite. It has a value of $400 a year for four years.

*The Toney B. Jackson Scholarship,* established by Toney B. Jackson of the Class of 1915, is given in alternate years to a member of the sophomore class and has a value of $400 a year for one year.

*The Freddie Levine Scholarship* was established from funds contributed by friends of Lieutenant Freddie Levine, who died in the service of his country. It pays $500 a year for four years.

*The Robert F. McCrackan Scholarship* has a value of $250 a year for four years and was established by a bequest in the will of Mr. Walter B. Metts, Class of 1903, honoring his classmate, Mr. McCrackan.

*The Major General Harry K. Pickett Memorial Scholarships* are supported from a fund made possible by a bequest of the late General Pickett, USMC, Ret., Class of 1911. These scholarships have a value of $800 a year for four years. They are awarded to young men of high moral character and citizenship with outstanding high-school records and financial need, who are either citizens of the State of South Carolina or sons of United States Marines.

*The Captain Anthony G. Prior Scholarship* was established in memory of Captain Prior, Class or 1964, who lost his life while in the service of his country in Vietnam. It is awarded to a needy young man with a strong desire for a military career. The value is $400 a year for four years.

*The Edgar A. Terrell Scholarship* is worth $800 a year for four years. It was made possible by a donation from Edgar A. Terrell, Class of 1915, and is limited to candidates from Mecklenburg County, North Carolina, or in case there is no qualified candidate, to the geographical boundary of the State of North Carolina.

*The James Ripley Westmoreland Scholarship* has a value of $400 a year for four years. This scholarship is to assist worthy South Carolina young men who are in need of financial assistance to obtain a college education. This scholarship is in memory of Colonel James

Ripley Westmoreland, a graduate of the Class of 1900, who served as Chairman and a member of the Board of Visitors for many years.

## Category II

*Association of Citadel Men Scholarships.*—The Association of Citadel Men maintains several scholarships in the amount of $200 each. The scholarships are awarded for one year only to both entering cadets and upperclassmen.

*The Oliver J. Bond Scholarship* is supported by the income from a trust fund established by alumni as a memorial to the late Colonel Oliver J. Bond, President of The Citadel, 1908-1931. The present value is $400 a year for four years.

*The Mark Clark Scholarship* is $800 a year for four years, derived from an income made possible by General Mark W. Clark, President Emeritus of The Citadel.

*The Star of the West Scholarships* were awarded for the first time in 1952. They cover all college expenses, as outlined in the catalogue, and are supported by the income from an anonymous trust fund. These scholarships are available only to students of outstanding ability and attainment without reference to financial need or geographical limitations.

*The Summerall Scholarship* is supported by the income from a trust fund established by alumni as a memorial to the late General Charles Pelot Summerall, President of The Citadel, 1931-53. This scholarship is worth $800 a year for four years.

*The W. Steve Weston, Jr., Class of 1938 Leadership Foundation Scholarship* pays all expenses, as outlined in the catalogue, for four years. It was made possible by a donation from Mr. W. Steve Weston, Jr., and is limited to residents of South Carolina.

## Category III

*The Captain William Forman Abernethy Memorial Scholarship* has a value of $200. It is awarded annually to the rising senior who has shown the greatest amount of determination and perseverance in improving himself during his years at The Citadel.

*The W. W. Benson Scholarship* pays all expenses, as outlined in the catalogue. Named in honor of the late Major W. W. Benson, Class of 1907, it is supported by his friends from Greenwood County, South Carolina.

*Cadet Insurance Aid Plan* consists of several scholarships maintained by the Cadet Insurance Aid Plan from revenue derived from the dividends of life insurance policies voluntarily purchased by members of graduating classes since 1953.

*The Renie Clark Scholarship* is $1,000 a year and awarded each year to a member of the senior class who best exemplifies the traits Mrs. Clark demonstrated in assisting students to adjust to cadet life. This scholarship is a memorial to Mrs. Mark W. Clark, who was the first lady of The Citadel for more than 11 years.

*Harry S. Dent Americanism Scholarship,* established by U. S. Senator Strom Thurmond, advisor to John P. Gaty Charitable Trust. Awarded annually to needy and worthy students, based on a paper on Americanism, the specific topic of which is announced prior to January 1. Applications submitted by February 1, and manuscripts submitted by April 1 of the academic year. Approximate value: $500. First award: 1972.

*The Exchange Club of Charleston Scholarship* of $1,000 is given each year to an outstanding cadet in the Corps from the Charleston area.

*The First Field Artillery Brigade, A.E.F.,* and the *Fifth Field Artillery Scholarships* pay $2,000 a year for four years. They were established in 1934 by the late Colonel Robert R. McCormick of Chicago and are limited to candidates from the State of Illinois.

*Greenville-Piedmont Citadel Club Scholarship,* with a value of $300 a year, is given annually to an outstanding young man from the Greenville area.

*The B. Calhoun Hipp Scholarship* has a value of $500 a year and is awarded annually to a young man from the Greenville area.

*Thomas Jefferson Political Science Scholarship* has a value of

$500 and is awarded each year to an outstanding senior majoring in political science. This scholarship is awarded by the National Society, Southern Dames of America.

*The Broadus R. Littlejohn Scholarship* was established in 1963 by Broadus R. Littlejohn, Jr., Class of 1949, in honor of his father. It pays $500 a year for four years.

*The Orphanage Fund Committee Scholarships,* awarded for the first time in 1959, cover all college expenses, as outlined in the catalogue, for four years. The recipients are limited to high-school seniors who are orphans. The Orphanage Fund Committee was started by the Corps of Cadets in 1952 for the purpose of fulfilling certain needs of the children living in the orphanages of Charleston. Excess donations within the Corps of Cadets have resulted in some of the money being set aside for these scholarships.

*President's Honorary Scholarships.* Each year Major General James W. Duckett gives several scholarships to outstanding high-school graduates and outstanding members of the current junior, sophomore, and freshman classes of The Citadel. Each scholarship has a value of $200.

*The South Carolina Electric and Gas Company Scholarship* is $500 awarded to an outstanding member of the Corps of Cadets from South Carolina.

*Vandiver-Sullivan Scholarship* has a value of $500 a year for four years. The recipients are limited to residents of Anderson County. This award was established by Mr. David S. Vandiver, Jr., Class of 1931, and Mr. Kelly W. Sullivan of Anderson.

*The West End Dairy Scholarship* was established in 1964 by Greswold Gwynette, Class of 1936, and pays $200 a year.

*The Western Electric Scholarship* is awarded each year to an outstanding senior majoring in engineering. The value is from $500 to $800.

*The George Walker White Scholarship* has a value of $200 and is awarded annually to the rising senior civil engineering student who best exemplifies the qualities of a potential outstanding civil engineer.

*The Judge C. C. Wyche Scholarships* are made possible by a gift from the late Judge C. C. Wyche of the Class of 1906.

## Category IV

There are numerous scholarships of this type. Applicants must apply directly to the individual or organization donors. Listed below are a few that have been continuous for many years.

*The Charleston City Scholarships* are worth $500 a year for four years. Appointments are made by the Committee on Ways and Means of the City Council on the basis of a competitive examination. Applicants must be residents of the City of Charleston.

*The Cogswell Scholarship of the Washington Light Infantry* pays $500 a year for four years and is limited to candidates who are members of the Washington Light Infantry, or, in the event no member is qualified, a son of a member of the Washington Light Infantry in good standing.

*The North Charleston Citizens' Scholarship Committee* each year gives numerous awards to worthy young men attending The Citadel from that area.

*Post-Courier Scholarships* given by the Charleston newspapers are limited to newspaperboys who deliver the local newspapers and attend South Carolina colleges and universities.

*Sottile Foundation Scholarships.* The Albert Sottile Foundation of Charleston, S. C., in accordance with its policy of furthering educational opportunities, offers several scholarships worth from $100 to $500 a year. Some scholarships are limited to young men in the employ of companies contributing to the Foundation, or to sons of the employees of those companies. Others are limited to Charleston County and appointments are made by the Foundation on the basis of competitive examinations.

## General

Applicants for scholarships need not specify any particular scholarship. All applicants will be evaluated and the best applicants selected for the scholarships available. Selections are made on the basis of comparative evaluations of high school records, with all attributes desirable in a well-rounded cadet being considered. Entrance-examination scores will be given some weight in the evaluation of an application.

*The Star of the West Scholarships* were established primarily for the purpose of attracting to The Citadel outstanding young men and are not restricted by either financial need or geographical limitations.

Completed scholarship application forms should be submitted to the Chairman of the Committee on Scholarships prior to March 15. Application for admission to The Citadel must be on file with the Registrar at the time the scholarship application is filed. The Scholarship Committee will screen the applications and make awards by the middle of April. In certain cases, applicants may be asked to appear for a personal interview.

For information regarding Army, Naval, and Air Force ROTC Scholarships see page 86.

## Loans and Grants

The Citadel participates in the National Defense Student Loan, Educational Opportunity Grant, and the Guaranteed Loan Program. To be eligible for aid through these programs a student must be accepted for admission to The Citadel. In awarding aid under these or other programs there is no discrimination because of race, creed, color, or national origin.

## National Defense Student Loans

Both currently enrolled cadets and new cadets who have been accepted for admission may apply for these loans. To be eligible for favorable consideration, applicants must establish financial need and give evidence of likely academic success. In accordance with the law, preference is given those applicants majoring in engineering, sciences, modern languages, or education.

To assist them in determining financial need, The Citadel National Defense Student Loan Committee requires the parents of all applicants to complete the Parents' Confidential Statement published and analyzed by the College Scholarship Service, Princeton, New Jersey

08540. The Citadel is one of the colleges holding membership in the College Scholarship Service.

A qualified student with demonstrated financial need may borrow up to the maximum amount of $1,000 per academic year. No interest is charged on these loans until the repayment period begins, which is nine months after the student ceases to attend an institution of higher learning. If the student enters the armed forces, Vista, or the Peace Corps, he may apply for a deferment of payment, and his repayment begins at the conclusion of his deferment period. If the student enters the teaching field (at any level) or armed forces, up to half of the loan may be cancelled on a scheduled basis. Repayment of a National Defense Student Loan is made to Wachovia Services, Inc., P. O. Box 3176, Winston-Salem, N. C. 27102.

## Educational Opportunity Grants Program

During the next academic year, The Citadel will participate in the Educational Opportunity Grants Program as established under Title IV, Part A of The Higher Education Act of 1965, Public Law 89-319. This program provides assistance to eligible qualified high school graduates of exceptional financial need, who for lack of financial means of their own or their families would be unable to enter or remain in college. Since any grant awarded must be equally matched, The Citadel uses the National Defense Student Loan as matching funds. Thus, the National Defense Student Loan application is used in applying for this program.

Grants will be awarded to a student who:

—is a national of the United States, or is in the United States for other than a temporary purpose and intends to become a permanent resident thereof;

—has been accepted for enrollment as a full-time undergraduate student, or is in good standing and in full-time attendance as an undergraduate student;

—shows evidence of academic or creative promise and capability of maintaining good standing in his course of study;

—has exceptional financial need, as determined by the institution in accordance with criteria and schedules prescribed by the Commissioner, which takes into account such factors as the number of dependent children, income and assets of the student's family, and without the assistance of an Educational Opportunity Grant would be unable to pursue a course of study at an institution of higher education.

## The Guaranteed Loan Program

*United Student Aid Funds, Inc.*

This program has terms very similar to the National Defense Student Loan program in regard to repayments and deferment, but without the cancellation clause for teachers and servicemen. Loans approved by The Citadel are made by private lending institutions directly to the student.

*State Guaranteed Loans (Out-of-State Students)*

Because of the diversity in regulations governing the program, students and parents interested in their state program are urged to write for information to the State Board of Education, Higher Education Assistance Authority, or similar agency in their home states.

## ROTC Scholarships

Army, Naval, and Air Force ROTC scholarships, which cover tuition, college fees, books, and supplies, plus $100 a month, are available to high-school seniors. Application should be made early in the senior year of high school, preferably by October 30. For further information, write the appropriate military department at The Citadel. Students who are awarded ROTC scholarships should see pages 70-72 of the expense section which concerns financial arrangements.

## Financial Need

For programs which require that financial need be determined, The Citadel requires parents of all applicants to complete and submit a Parents' Confidential Statement form to the College Scholarship Service, Box 176, Princton, New Jersey 08540.

Entering freshmen should obtain the Parents' Confidential Statement through their local high schools. Cadets should direct their requests to the Financial Aid Office.

## Application Deadline

All aid applications for the academic year beginning in August should be in the Financial Aid Office by March 15. Those received after this date will be considered as to date received and availability of funds.

## Information and Applications

Further information about financial aid programs at The Citadel and application forms should be requested from the Financial Aid Office, The Citadel, Charleston, S. C. 29409.

## Commercial Loan Programs

For parents who prefer to pay their educational expenses in monthly installments, names and information on private loan plans will be forwarded upon request.

# Department of Student Activities

Student activities are those activities in which students are involved when outside of the classroom. Their purpose is to provide for each student the choice of engaging in one or more of the sponsored activities in order to assume his Citadel community responsibility in an area of his liking and capability.

When new cadets report to the college, all are at once put in uniform, and, as far as possible, all artificial distinctions based on wealth, position, or influence are minimized, and the cadet is encouraged to achieve his place by individual merit.

Although all cadets live under practically identical conditions and are rated by the same standards, student activities offer a wide range of opportunities for each to develop in accordance with his individual needs and aptitudes.

## Committees of the Corps of Cadets

The President's Advisory Committee was inaugurated for the purpose of keeping the President and the Corps of Cadets working in a congenial relationship.

The Orphanage Fund Committee is directly in charge of all phases of its program. The primary objective is to give the children of the Charleston orphanages a better Christmas. The committee collects monetary donations from students, finds out the needs of the orphan children, makes the purchases, and wraps and tags the presents by name. Before Christmas furlough, the students form a motorcade to visit each of the orphanages to present the gifts in person. This program was organized in 1952. The Orphanage Fund Committee maintains two all-expense scholarships for cadets who enter The Citadel from orphanages.

The Activity Advisory Committee has the mission of advising the Vice President for Student Activities on all activities under his jurisdiction. The committee pays particular attention to the auxiliary enterprises.

The Ring and Invitation Committee of the first class is charged with the responsibility of purchasing the class rings and the commencement invitations of the class. Specific regulations govern the design and specifications, the award of the contract for manufacture, the ordering, and the wearing of the ring. The committee is in charge of the ceremonies conducted when the firstclassmen receive their rings.

## Social Events

All Citadel dances are under the sponsorship of the Standing Hop Committee, an organization selected from each of the three upper classes. The duties of this committee are to set dates for the dances, provide bands, and coordinate all plans for the hops.

Citadel hops are the highlights of the social activities of the cadet. As dances are strictly for and by students, few invitations are issued to civilians. The formal hops held annually are the Homecoming Hop, First Class Ring Hop, and the Corps Day Hop. Although these dances are formal, by tradition corsages are not worn by the cadets' dates. Every student is privileged to attend the social activities held.

## The College Hostess

The Citadel hostess, Mrs. A. E. Dufour, serves as social advisor for students. Her office is located in the reception room of Mark Clark Hall. Under her supervision, dancing classes are conducted and informal tea dances are held in the auditorium on weekday afternoons. At the time of formal hops, she arranges for overnight accommodations in private homes for the ladies from out of town. She keeps the reception room open and maintained in good taste for the use of cadets and their guests from 9 a.m. until 5 p.m. daily. The hostess serves the students constantly in the discussion and solution of their personal problems.

## The Fine Arts Series

Now looking forward to its eighth season, The Citadel Fine Arts Committee will continue its efforts to make available a program which will be both entertaining and instructive. During the first seven years of the series, cadets have been able to attend Shakespearean plays, T. S. Eliot's *Murder in the Cathedral,* a dramatic presentation of the poetry of Robert Frost, and traditional dances of Spain, Korea, France, and Yugoslavia by companies from those lands. They have heard Nell Rankin, Metropolitan Opera mezzo-soprano; Ruth Slenczynska, pianist; Leonard Rose, cellist; and Sabicas, Flamenco guitarist. Groups presented have been the Nadeau String Quartet from Canada; Stockholm University Chorus; the New York Woodwind Quintet; the New York Brass Quintet; the Metropolitan Opera Studio Ensemble; the Longines Symphonette; the Tyre Harp Ensemble; and a Consort of Viols. A very special experience was provided by the presentation in Summerall Chapel of Benjamin Britten's *Curlew River,* an opera for church performance. The series next year will present new artists and performances of a kind not yet offered.

## Publications

*The Brigadier,* published weekly by a staff of students, serves as the campus newspaper and is financed by an allotment from the student activities fee, augmented by revenue from subscriptions and the sale of advertising space.

*The Sphinx,* the college yearbook, is published annually by a staff of students. This publication serves as a semi-official record of the year. By means of copy and photographs, the faculty and staff, student classes, military organizations, athletic activities, social affairs, and other student programs are portrayed vividly to preserve a record of student life for posterity. *The Sphinx* is financed by an allotment from the student activities fee and the sale of advertising space.

*The Shako,* the literary magazine, is published three times a year. It is supported by an allotment from the student activities fee.

*The Guidon,* the cadet handbook, is published annually by a staff of cadets. The handbook contains a complete description of the activities of the college, college history, customs, and duties and responsibilities of cadets, plus other phases of cadet life. It is particularly helpful to entering freshmen. Financed by the allocation of a portion of the student activities fee, it is distributed to all students at the beginning of the college year.

*The Student Directory,* published in the fall of each year by a student staff of Alpha Phi Omega, lists names and home addresses of all students at the college. It, too, is supported by funds from the student activities fee.

## Activities Coordinated by the Department

Many of the student activity organizations of real importance in the educational training process function under academic, military, or athletic departments, with which they are separately and directly related. The department seeks to assist in the coordination of the literary and discussion groups, professional clubs and societies, musical organizations, and certain other organizations.

## Literary and Discussion Groups

Six student societies offer opportunities for discussing subjects of cultural interest and for developing proficiency in public speaking: the Calliopean Literary Society, the Polytechnic Literary Society, the Council on International Relations and United Nations Affairs, the English Club, the History Club, and the Round Table.

The Calliopean Literary Society sponsors forensic interest including radio speaking, intramural debating, and oratory. Membership is open to all students.

The Polytechnic Literary Society, organized in 1847 and reactivated in 1965, undertakes each year an active program of formal intercollegiate debates of national college topics. The purpose of the society is to promote sound inquiry into questions of current national import as well as to develop excellence in public speaking. Members of all four classes are invited to join.

The Council on International Relations and United Nations Affairs is devoted to the study of contemporary world economic and political problems. Membership is restricted to students especially interested in government and politics.

The English Club is an organization of students interested in English. Professional writers are heard and matters of literary interest are discussed.

The History Club has as its purpose to promote interest in the study of history through a study of outstanding historians, through visiting historical sites, and through informative speeches by faculty, students, staff, and outside speakers.

The Round Table is an elite discussion group with a limited membership. Elections are made from lists prepared by the faculty of those students with marked intellectual interest.

Other clubs and groups are Pi Sigma Alpha, national political science honor society; Phi Alpha Theta, national honor society in history; Political Science Club; The Citadel Delegation, S. C. State Student Legislature; and Alpha Phi Omega, national service fraternity.

## Professional Clubs and Societies

The following professional clubs and chapters of national professional societies are to be found at The Citadel: Knox Chemical Society; Premedical Club; Student Chapter, American Society of Civil Engineers; Student Chapter, Society of American Military Engineers; Student Chapter, American Ordnance Association; Economic Honor Society; Association of the United States Army; Beta Iota Chapter of Pi Sigma Alpha, national political science honor society; Phi Alpha Theta, national honor society in history; Mathematics Society; Student Chapter, American Road Builders Association; Student Section of American Institute of Physics; and Student Education Association of South Carolina.

## Musical Organizations

The cadet orchestra, known as "The Bulldogs," furnishes music for informal dances.

The Citadel Chapel Choir serves as the choir at chapel services and gives programs in Charleston churches. The Catholic and Episcopal groups also have their own choirs.

The Citadel Band provides music for parades, reviews, and other official ceremonies. The Citadel Bagpipers are an integral part of the Band.

## Other Organizations

Several important cadet organizations do not come under a specific classification. The following have distinctive functions in cadet life: The Summerall Guards (senior drill platoon), the Bond Volunteers (junior drill platoon), the Junior Sword Drill, Sons of the American Revolution, and the Camera Club.

## Recreational

## The Citadel Yacht Club

The Citadel Yacht Club membership consists of all members of the student body, faculty, and staff. There are no dues connected with the membership, and preference is given to students in the use of the club facilities.

The club fleet consists of a 54-foot cabin cruiser, 20 small sailboats, and 5 outboard motorboats, all available to students. Instruction is available for all students by experienced members of The Citadel sailing team. Intramural sailing competition is conducted among qualified small-boat handlers. This program enables any student to become proficient in a sport which he can carry over into later life.

Yacht Club facilities consist of a club house, storage area for small boats, dockage, marine railway, sail loft, work area for maintenance and repair of small boats, and boat storage for small fee.

## The Rod and Gun Club

All students are permitted to participate in Rod and Gun Club activities. The club room, in the rear of the Armory, provides a convenient place for meetings and contains personal lockers and a gun-rack facility. Organized hunting and fishing trips and a growing number of outdoor activities are available.

The club has available an automatic trap range. A shell reloader provides members with ammunition at low cost. The main objectives of the club are to extend an appreciation for good sportsmanship and to increase the enjoyment of outdoor activities.

## The Citadel Flying Club

The purpose of The Citadel Flying Club is to promote interest in aviation and flying among the student body. The club owns and operates a Piper Colt aircraft, which is availabe for instruction at a reasonable fee and also for cross-country flights by qualified student pilots. All flying is performed in strict compliance with regulations of the Federal Aviation Administration. Membership is open to all students. Permission of a student's parents is required for membership.

## Facilities

### Mark Clark Hall

Many of the student activities are housed in Mark Clark Hall, The Citadel's student union building. This handsome and spacious structure, dedicated on May 31, 1957, was first used during the 1957-58 session. The structure is named in honor of General Mark Wayne Clark, President Emeritus. Its facilities are as follows:

*First Floor*

Reception Room
Barber Shop
Cadet Canteen
Post Office
Billiard Room
Bowling Alley

*Second Floor*

Lounge & Club Room
Kitchen
Alcove Lounge
Auditorium
Television Room
Reading Rooms
Executive Offices

*Third Floor*

Sphinx Staff Office
Brigadier Staff Office
Shako Staff Office
Guidon Staff Office
Honor Court
Projection Booth
Dark Room
10 Guest Rooms
Catholic Chaplain's Offic
and Chapel

## The Beach Club

The Colonel Robert R. McCormick Beach Club of The Citadel is located on the Isle of Palms, near Charleston. It offers students unparalleled opportunity for enjoyment of sun, sea, and surf. The beautiful two-story club house is on a five-acre tract overlooking the Atlantic Ocean. The club was named to memoralize a great American soldier, editor, and philanthropist, Colonel Robert Rutherford McCormick, whose gift to The Citadel made possible the construction of the facility.

The Beach Club is for the use of students, staff, faculty, and their guests only.

Drinking or the possession of alcoholic beverages is prohibited at the Beach Club. Cadets must be in complete uniform when arriving and leaving; swimming is authorized only when life guards are on duty; no bathing suits may be worn in the main upstairs room, but they may be worn on the porches; students will limit visitors to three, except when visiting families are guests.

The Beach Club hours vary with the seasons of the year and are set to accommodate the needs of the students and summer-school students. Parts or all of the facilities may be reserved for group functions.

The Beach Club is well equipped for parties. On the second floor, in addition to a large screened porch, are a modern kitchen and a general purpose room with huge open fireplaces at each end. The ground floor contains an apartment for the resident custodian and the bathhouse area.

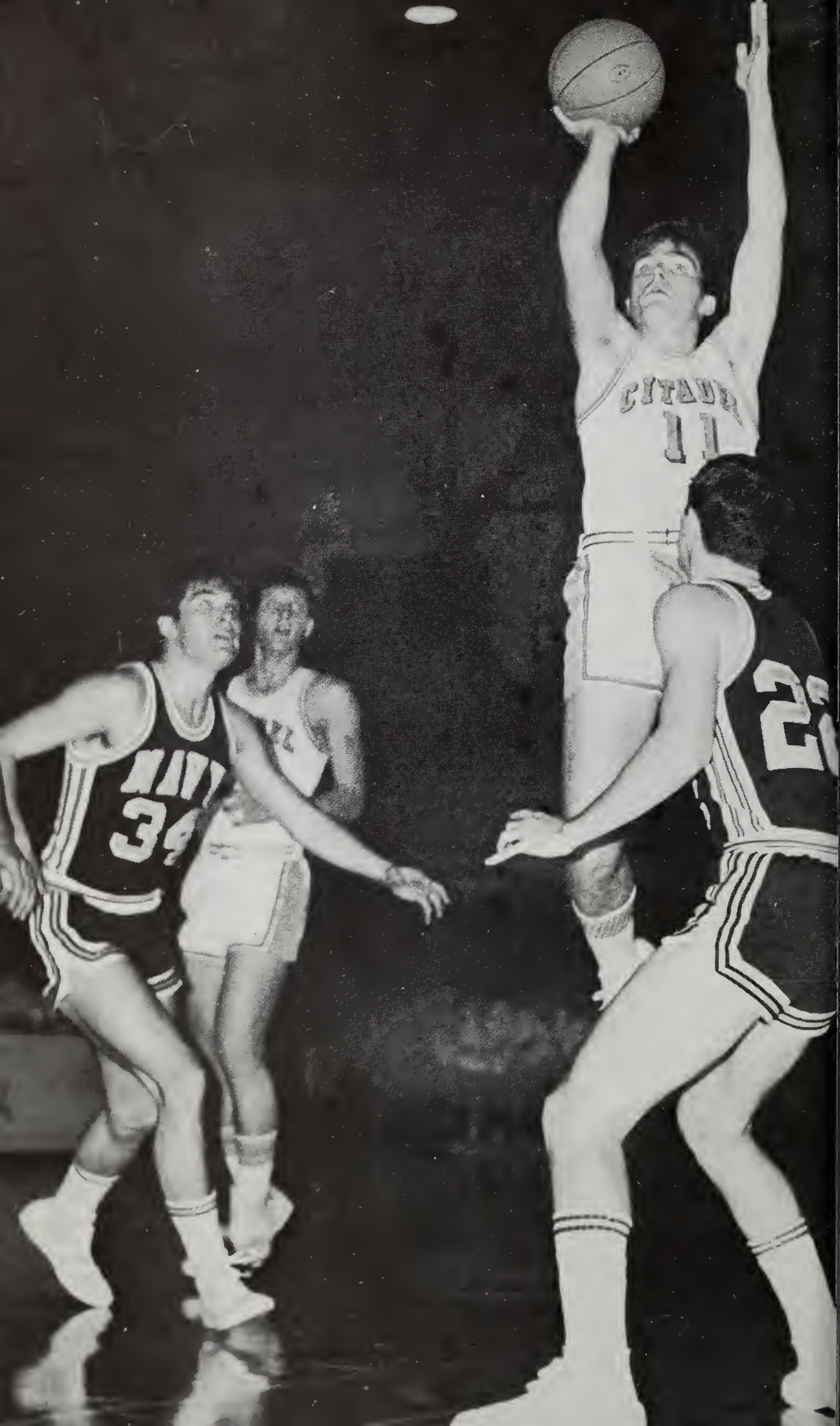
An enclosed barbecue and grill area on the property offers protection from the elements for parties suited for these facilities. The area is floodlighted to facilitate parties at night.

## Auxiliary Enterprises

The Citadel owns and operates all auxiliary enterprises, under the supervision of the Department of Student Activities. These enterprises exist primarily to provide appropriate, timely services for the convenience of the student body. The net profits from each enterprise are deposited in the Mark Clark Hall Fund, which is used exclusively to foster and support other phases of student life as directed by the President of The Citadel.

## Service Station

The Citadel Servicenter, located east of the Armory, fills a need for convenient automobile service. The service station hours are regulated to accommodate the needs of the students, faculty, staff, and other employees of The Citadel. The prices are reasonable, and the station is fully equipped.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# Department of Intercollegiate Athletics

The mission of the Department of Athletics at The Citadel is to develop, maintain, and continue to improve a well-rounded program of athletics geared to the aims and objectives of The Citadel, the Southern Conference, and the National Collegiate Athletic Association.

The Citadel is a member of the NCAA with University Division classification. In addition, the college is a member of the Southern Conference, which is comprised of Appalachian State University, The Citadel, Davidson College, East Carolina University, Furman University, Richmond University, Virginia Military Institute, and the College of William and Mary.

## The Sports Program

In Southern Conference competition, The Citadel has established a strong winning tradition and has maintained accumulative winning records which annually place cadet teams in the upper division of conference standings. Through the years, the list of All-State, All-Conference, and All-American selections has been impressive.

The Department of Intercollegiate Athletics sponsors 11 varsity teams and freshman teams in football and basketball. A cadet-athlete can choose to compete in football, basketball, cross-country, soccer, rifle shooting, wrestling, indoor track, outdoor track, baseball, golf, and tennis. In addition, a cadet may participate as a member of three other teams which compete in their respective regional conferences: sailing, crew, and gymnastics. Each year, more than 690 cadets participate as players, managers, or student trainers.

The Citadel, under NCAA and conference regulations, maintains a grant-in-aid program which helps keep cadet teams competitive in the Southern Conference.

JOHNSON HAGOOD MEMORIAL STADIUM
THE CITADEL BULLDOGS

## Facilities

Athletic facilities at The Citadel are among the best in the conference. Home football games are played in Johnson Hagood Stadium, which seats more than 22,000 spectators. The Citadel Armory, seating approximately 5,000, provides a modern facility for home basketball games. Other indoor facilities include an indoor rifle range, a well-equipped wrestling practice area, and an Olympic-size swimming pool.

Outdoor facilities for practice and competition include six all-weather tennis courts, two asphalt tennis courts, a quarter-mile track with a 220-yard straightaway, four practice fields for football and soccer, and an outdoor rifle range.

Baseball games are played in College Park baseball field, a large lighted baseball stadium adjacent to The Citadel campus. College Park is also the site of home soccer games during the fall.

All facilities, maintained on a daily basis by The Citadel Grounds Department, are available for physical education classes and intramural sports when not in use by varsity teams.

## Coaching Personnel

All intercollegiate teams are handled by experienced and competent coaches, many of whom teach in various other departments of The Citadel. A head trainer for all teams works closely with the college surgeon, supervising the practice and competition for varsity and freshman teams.

# Honors and Awards

## The Palmetto Award

The award is made by the Board of Visitors in recognition of exceptional performance which reflects great credit on The Citadel or the State of South Carolina. It is to be made to a member of the Corps of Cadets, alumni, faculty, or staff of The Citadel, or any other person whose service to the college or state is deemed worthy of consideration. Members of the Board of Visitors, the President of The Citadel, or the Association of Citadel Men may make nominations for candidates for this award, but recipients must be unanimously approved by the Board of Visitors. This award takes precedence over all other honors awarded by The Citadel with the exception of honorary degrees.

## Commencement Honors

*The Algernon Sydney Sullivan Awards* are bronze medallions presented by the college, through the benefaction of the New York Southern Society, to students or others in recognition of high thought and noble endeavor. Established by the Society in 1925, the awards have been made to The Citadel since 1933.

*The John O. Willson Ring.*—The bequest of Dr. John O. Willson, a ring is given annually to the member of the senior class voted by his classmates as the manliest, purest, and most courteous member of his class.

*The Scholarship Medal* is presented annually by the Board of Visitors to the cadet graduating at the head of his class.

## Academic Honors and Awards

*General High Honors* are awarded to those cadets in the graduating class who have achieved an average academic standing for the four years of a grade-point ratio of 3.60 or higher.

*General Honors* are awarded to those cadets who have achieved an average academic standing for the four years of a grade-point ratio between 3.50 and 3.59, inclusive.

*Department Honors* are awarded on recommendation of heads of de-

partments to those cadets of the graduating class who have established a grade-point ratio of 3.50 or better in at least 36 semester hours work in their major department. This must include all departmental work required in the junior and senior years.

*The Dean's List* is a recognition given to those students registered for 11 or more semester hours whose grade-point ratio is 3.00 or higher, with no grade below C, for the work of a semester. Medals are awarded and worn on uniforms the following semester.

*Gold Stars* are awarded to those students on the Dean's List who have made a grade-point ratio of 3.60 or higher for the work of a semester. Stars are worn on the collar of the uniform during the following semester.

*The Citadel Honorary Society.* Membership in The Citadel Honorary Society is limited to members of the first class whose standing is in the upper eight percent of their class.

*The American Legion ROTC Scholastic Excellence Awards* are presented to Army, Navy, and Air Force ROTC firstclassmen and secondclassmen who have demonstrated outstanding scholastic excellence.

*The Francis Marion Cup* is awarded by the Rebecca Motte Chapter, D.A.R., to a cadet of the graduating class for outstanding achievement in American history.

*The Granville T. Prior Award* consists of key and scroll presented annually by The Citadel History Club to the student whose senior research project is selected by a joint faculty committee as the best in the Departments of English, History, and Political Science.

*William E. Mikell Award,* a cash award donated by the late William E. Mikell, is awarded to that member of the graduating class having the highest average in English over a three-year period.

*The Wall Street Journal Student Achievement Award* is donated by the *Wall Street Journal* and awarded to the student having the greatest achievement in business administration during the school year.

*The Charles P. Summerall Cup* is donated by the European Citadel Association and awarded annually for one year to the company of cadets which makes the greatest improvement in scholastic work during the college year.

*Post-Courier Awards* are given by the *Post-Courier* to the five best writers on *The Brigadier* staff as chosen by a committee of faculty and staff members.

*The Peter Gaillard Memorial Award* is given annually by Colonel and Mrs. St. Pierre Gaillard in memory of Peter Gaillard of the Class of 1948 to a graduating firstclassman majoring in electrical engineering on a basis of scholastic attainment, leadership, and participation in extracurricular activities.

*The Charles T. Razor Memorial Award* is given annually in memory of Colonel Charles T. Razor to a graduating cadet selected by the head of the Department of Electrical Engineering on the basis of scholastic achievement, ability, and willingness to help others.

*The Colonel Louis Shepherd LeTellier Award* is given annually to a member of the graduating class attaining the highest academic average in civil engineering.

*The George Walker White Award* is given annually by Mrs. James Boyd Strawn and Mrs. Robert Neal Garrison in memory of their father, Class of 1904. This monetary award goes to a member of the graduating class for outstanding achievement in civil engineering.

*The Colonel Christopher Schultz Gadsden Memorial Award,* in memory of Colonel Gadsden, Class of 1852, is given annually to the "best all-around civil engineering graduate" as selected by the civil engineering faculty.

*The Reuben Burton Pitts III, Memorial Award* is given annually in memory of Cadet Reuben Burton Pitts III, Class of 1963, to the second-classman who is selected by his classmates as showing the greatest concern for the well-being of other cadets.

*The Carlisle Norwood Hastie Award* is given annually to the graduating firstclassman who has been selected by his classmates as having shown the most tact, consideration, and courtesy to his fellow students.

*The Henry J. Taylor Cup* is presented annually to the member of *The Brigadier* staff who has demonstrated the greatest journalistic improvement during the current school year.

*The Colonel James K. Coleman Award* is in honor of Colonel Coleman, Class of 1919, who established the Department of Political Science at The Citadel. It is given annually by Pi Sigma Alpha, National Political Science Honor Society, to the firstclassman in political science with the highest scholastic record for the four years.

## Military Awards

*The Order of Cincinnati Award* is presented annually to a cadet officer who has exemplified in the highest degree the qualities of soldier and citizen.

*The Wade Hampton Saber* is awarded annually by the South Carolina Division, Daughters of The Confederacy, to the member of the first class who is most outstanding in leadership and who makes the greatest contribution to The Citadel while a cadet.

*Army ROTC Distinguished Military Student Program* — Army ROTC students whose proficiency in military training and whose qualities of leadership and attention to duty have merited the approbation of the Professor of Military Science are designated Distinguished Military Students. Distinguished Military Students are eligible to apply for appointment as second lieutenants in the Regular Army when they have registered for their last academic year.

*The 103rd Field Artillery Award* was established by the veterans' organization of that regiment as a trophy to be won each year by the company of cadets which has attained the best record in discipline in the Corps of Cadets.

*The Association of U.S. Army Medal* is donated by the Association of the United States Army and awarded annually to the outstanding Army ROTC secondclassman.

*A Certificate of Meritorious Leadership Achievement* is awarded annually by the Commanding General, Third United States Army, to a graduating cadet selected on the basis of leadership development throughout his ROTC career.

*The Widder Award* is presented annually by Mr. and Mrs. John D. Widder in memory of their son, Capt. David John Widder, U.S.A., Class of 1959, to the outstanding Distinguished Military Student in Army ROTC.

*The Washington Light Infantry Marksmanship Trophy and Medals* consists of a trophy awarded annually for one year to the organization whose team makes the highest score in smallbore rifle marksmanship; medals to the cadets making the highest individual scores. All are presented by the Washington Light Infantry.

*The United States Naval Institute Awards* consist of a membership certificate in the Naval Institute for a one year period awarded to an outstanding NROTC regular cadet in the senior class and to an outstanding NROTC contract cadet in the senior class.

*The Marine Corps Association Award* consists of a certificate and membership in the Association for a one-year period awarded to the outstanding junior or senior Marine-option cadet who has displayed the highest qualities of perseverance, integrity, motivation, and devotion to duty.

*The Navy League Sword* is awarded annually by the Navy League to the most outstanding cadet to be commissioned in the U.S. Navy or U.S. Marine Corps.

*Distinguished Air Force Reserve Officers' Training Corps (AFROTC) Cadets*—The Professor of Aerospace Studies designates as Distinguished AFROTC Cadets those senior cadets who distinguish themselves by displaying outstanding qualities of leadership, adaptability to military training, and academic ability. Those Distinguished Cadets who are selected for Regular appointment will be considered for final approval at USAF Military Personnel Center. Distinguished Cadets not initially selected for Regular appointment will retain the Distinguished Graduate identification for subsequent consideration of future Regular appointment boards.

*The Air Force Association Award* is presented each year to the outstanding first class AFROTC cadet possessing outstanding leadership characteristics.

*The General Dynamics AFROTC Cadet Award* is donated by Convair Division to a sophomore who has demonstrated outstanding qualities in the AFROTC program.

*Air Force Times Award of Merit* is awarded annually to a graduating Air Force ROTC cadet who has distinguished himself by contributing materially to constructive public attention for the Cadet Corps.

*The Roland F. Wooten Trophy* is presented annually to the outstanding graduating cadet in the pilot category. The late Major Wooten, the most decorated airman from South Carolina, was a 1936 Citadel graduate and a leading citizen from Charleston. The award is based on performance in the flight instruction program.

*The American Fighter Aces Award* is presented annually to the outstanding graduating cadet in the pilot category in each geographical AFROTC area. It is based on his performance and achievement as an AFROTC cadet.

*The American Legion Army, Navy, and Air Force General Military Excellence Award* is presented annually to a cadet in each of the first and second classes who has demonstrated outstanding qualities of military leadership, discipline, character, and citizenship.

*The National Defense Transportation Association Award* is presented annually to an outstanding ROTC firstclassman majoring in business administration, civil engineering, or political science.

*The Society of American Military Engineers Award* is awarded annually to a member of the first and second class who is majoring in engineering and has demonstrated outstanding academic achievements.

*The South Carolina Reserve Officers Association Awards* are donated annually by the Reserve Officers Association and awarded to the outstanding Army, Navy, and Air Force ROTC first, second, and third class cadets for demonstrating courtesy, personal attributes, positive attitude, and promotion potential.

*The Daughters of the American Colonists Award* is given annually to the firstclassman with the best disciplinary record during his four years at The Citadel.

*The Armed Forces Communications and Electronics Association Awards* are awarded annually to the outstanding Army, Navy, and Air Force ROTC first and second class cadets majoring in engineering, mathematics, chemistry, and physics.

*Sons of the American Revolution Awards* are awarded annually to outstanding Army, Navy, and Air Force fourthclassmen on the basis of leadership ability, soldierly bearing, and excellence in ROTC studies and activities.

*The Daughters of the American Revolution ROTC Award* is presented annually to an outstanding graduating ROTC cadet selected for academic excellence, leadership ability, adherence to military discipline, dependability and good character, and a fundamental and patriotic understanding of the importance of ROTC training.

*The Major William M. Hutson Award* is presented annually by Colonel and Mrs. J. C. Hutson in memory of their son, Major William M. Hutson, USAF, Class of 1939, to a rising senior selected for outstanding leadership ability, academic standing, and devotion to duty.

*The Commandant's Cup,* donated by the late Colonel W. C. Miller, is awarded annually to the best-drilled company.

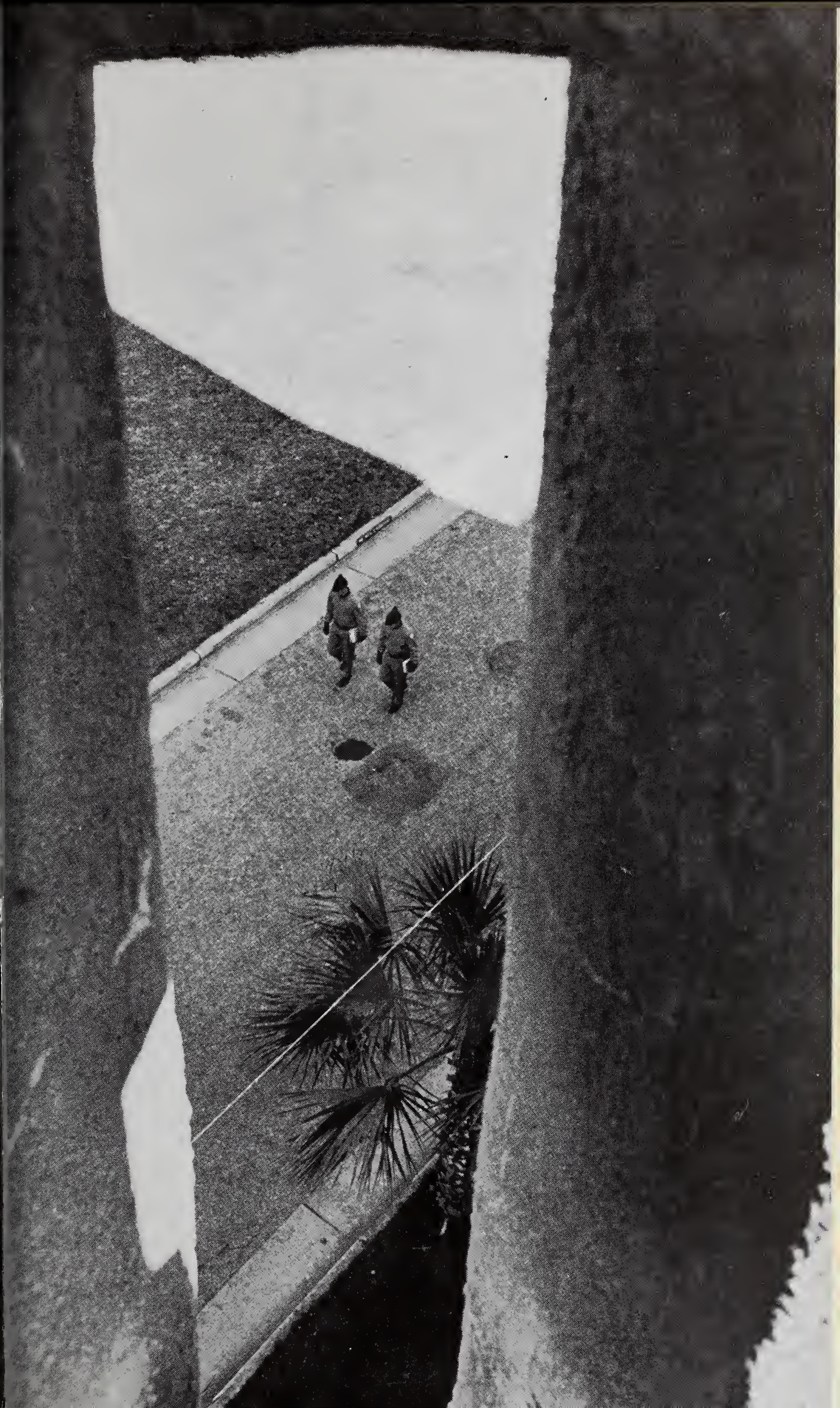
*The W. C. White Medal* is presented annually by Mrs. W. C. White to the company commander of the best-drilled company.

*The Kelly Cup* is awarded annually to the squad winning the squad drill competition.

*The Star of the West Medal,* originally presented to The Citadel by Dr. B. H. Teague, is awarded annually to the best-drilled cadet.

## Other Awards

The list of awards above is not complete, but space precludes a full listing. There are many other awards given in recognition of military and scholastic excellence, as well as meritorious participation in cadet activities and athletics.



# Courses of Study

The following pages contain a detailed schedule of the curriculum required for each degree according to the major subject elected. The clock hours and the credit value of each course are noted. The individual courses are described under the appropriate departmental heading in the pages following the schedules.

The geology courses are offered in the Department of Chemistry; the fine arts, psychology, philosophy, and sociology in the Department of Education; computer science in the Department of Mathematics.

The courses of the fourth class are numbered from 101 upward, of the third class from 201 upward, of the second class from 301 upward, and of the first class from 400 upward.

The course of study is essentially the same for most freshmen except for those in the science or engineering majors, who are required to take 40-101 and 40-102 (General Chemistry), and may be required to take some courses in the particular department of specialization. Certain subjects are required in the sophomore year of all students, the remaining subjects being determined by the course which the student chooses to follow during his junior and senior years. Major work is offered in the following departments: Biology, Business Administration, Chemistry, Civil Engineering, Education, Electrical Engineering, English, History, Mathematics, Modern Languages, Physical Education, Physics, and Political Science. A thorough premedical program is also available in the B. A. Chemistry and the Biology majors.

## BIOLOGY MAJOR
### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| General Chemistry | 40-101 | 3 | (3,0) |
| General Chemistry Laboratory | 40-111 | 1 | (0,2) |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Introduction to Botany | 47-103 | 4 | (3,2) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 16 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| College Physics | 26-205 | 4 | (3,2) |
| German, French, or Russian | 91-101, 92-101, or 99-101 | 3 | (3,0) |
| American History | 70-101 | 3 | (3,0) |
| Biology Elective | | 3 ( 4) | |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 (19) | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| German or | 91-203 | 3 | (3,0) |
| French, or Russian | 92-201 or 99-201 | | |
| College Physics | 26-207 | 4 | (3,2) |
| Organic Chemistry | 40-207 | 4 | (3,3) |
| Biology Elective | | 3 ( 4) | |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 16 (17) | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Biology Elective | | 3 ( 4) | |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 (18) | |

The B.S. Biology major requires at least 33 credits in biology. Courses 47-103, 47-104, and 47-411 are required of all majors. The seven remaining electives should include at least one course from each of the following areas: *Physiology:* 47-205, 47-403, 47-404, 47-413; *Field Biology:* 47-314, 47-321, 47-406, 47-408, 47-409, 47-410; *Developmental Biology:* 47-208, 47-308, 47-401; and at least two courses from *Descriptive Biology:* 47-301, 47-302, 47-310, 47-312, 47-315, 47-316, 47-402, 47-405, 47-418. It is recommended that each biology major take at least one advanced botany and one advanced zoology course. Other language, history, mathematics, chemistry, and physics requirements are listed above.

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

## BIOLOGY MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| General Chemistry | 40-102 | 3 | (3,0) |
| General Chemistry Laboratory | 40-112 | 1 | (0,2) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Introduction to Zoology | 47-104 | 4 | (3,2) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 16 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| College Physics | 26-206 | 4 | (3,2) |
| German, French, or Russian | 91-102, 92-102, or 99-102 | 3 | (3,0) |
| American History | 70-102 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| German, or | 91-204 | 3 | (3,0) |
| French, or Russian | 92-202 or 99-202 | | |
| Elective | | 3 | (3,0) |
| Organic Chemistry | 40-208 | 4 | (3,3) |
| Biology Elective | | 3 | ( 4) |
| Biology Elective | | 3 | ( 4) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 17 (19) | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Public Speaking | 80-205 | 3 | (3,0) |
| Biology Elective | | 3 | ( 4) |
| Senior Seminar | 47-411 | 1 | (1,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| *Senior Research Project, or | 47-420 | 3 | (3,0) |
| Biology Elective | | 3 | ( 4) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 17 (19) | |

*Prerequisite is approval by department head and supervising professor.

## BUSINESS ADMINISTRATION MAJORS

### First Semester

| | | | |
|---|---|---|---|
| FRESHMAN YEAR— | | | |
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |
| SOPHOMORE YEAR— | | | |
| Major British Writers | 80-201 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| Economic Origins and Principles | 5-201 | 3 | (3,0) |
| **American National Government | 60-201 | 3 | (3,0) |
| ***Accounting Principles and Practice I | 5-201 | 3 | (2,2) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 17 | |
| JUNIOR YEAR— | | | |
| Intermediate Accounting | 5-300 | 3 | (2,2) |
| Business Law I | 5-305 | 3 | (3,0) |
| **Principles of Labor | 5-307 | 3 | (3,0) |
| **Marketing Principles | 5-309 | 3 | (3,0) |
| **Approved Non-Business Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |
| SENIOR YEAR— | | | |
| Corporate Financial Management | 5-403 | 3 | (3,0) |
| Marketing Management | 5-405 | 3 | (3,0) |
| Money and Banking | 5-407 | 3 | (3,0) |
| Personnel Management | 5-409 | 3 | (3,0) |
| **Departmental Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |
| DEPARTMENTAL ELECTIVES— | | | |
| Business Statistics II | 5-206 | 3 | (3,0) |
| General Insurance | 5-308 | 3 | (3,0) |
| Foreign Trade | 5-310 | 3 | (3,0) |
| Intermediate Economics | 5-314 | 3 | (3,0) |
| Communicating in Business | 5-316 | 3 | (3,0) |
| Business Law II | 5-318 | 3 | (3,0) |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

**May be taken in either semester.

## BUSINESS ADMINISTRATION MAJORS
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| Economics Principles and Problems | 5-202 | 3 | (3,0) |
| **Business Statistics I | 5-205 | 3 | (3,0) |
| ***Accounting Principles and Practice II | 5-212 | 3 | (2,2) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 17 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Taxation | 5-312 | 3 | (3,0) |
| Business Organization and Finance | 5-306 | 3 | (3,0) |
| **Computer Principles | 36-305 | 3 | (3,0) |
| **Government Finance | 5-311 | 3 | (3,0) |
| **Departmental Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Production Management | 5-410 | 3 | (3,0) |
| **Approved Non-Business Elective | | 3 | (3,0) |
| Approved Non-Business Elective | | 3 | (3,0) |
| Departmental Elective | | 3 | (3,0) |
| Departmental Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 136

DEPARTMENTAL ELECTIVES—

| | | | |
|---|---|---|---|
| Cost Accounting | 5-401 | 3 | (2,2) |
| Advanced Accounting Problems | 5-402 | 3 | (2,2) |
| Investments | 5-404 | 3 | (3,0) |
| Transportation | 5-406 | 3 | (3,0) |
| Bank Management | 5-408 | 3 | (3,0) |
| Auditing | 5-416 | 3 | (2,2) |

***Formerly listed as 5-303 and 5-304.

## B.S. CHEMISTRY MAJOR
### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| General Chemistry | 40-101 | 3 | (3,0) |
| General Chemistry Laboratory | 40-111 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-131 | 4 | (4,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 16 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Organic Chemistry | 40-207 | 3 | (3,0) |
| Organic Chemistry Laboratory | 40-217 | 1 | (0,3) |
| Intermediate Calculus | 30-231 | 4 | (4,0) |
| German | 91-101 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 16 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| General Physics | 26-211 | 4 | (3,2) |
| Quantitative Analysis | 40-300 | 4 | (2,4) |
| Physical Chemistry | 40-305 | 3 | (3,0) |
| Physical Chemistry Laboratory | 40-315 | 1 | (0,3) |
| Scientific German | 91-203 | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Inorganic Chemistry | 40-401 | 3 | (3,0) |
| Advanced Topics Organic | 40-403 | 3 | (3,0) |
| Organic Preparations | 40-407 | 3 | (0,6) |
| Physical Chemistry Topics | 40-411 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

## B.S. CHEMISTRY MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| General Chemistry | 40-102 | 3 | (3,0) |
| General Chemistry Laboratory | 40-112 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-132 | 4 | (4,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 16 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| General Physics | 26-110 | 4 | (3,2) |
| Differential Equations | 30-232 | 3 | (3,0) |
| Organic Chemistry | 40-208 | 3 | (3,0) |
| Organic Chemistry Laboratory | 40-218 | 1 | (0,3) |
| German | 91-102 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 19 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Instrumental Methods | 40-302 | 4 | (2,4) |
| General Physics | 26-212 | 4 | (3,2) |
| Physical Chemistry | 40-306 | 3 | (3,0) |
| Physical Chemistry Laboratory | 40-316 | 1 | (3,0) |
| Scientific German | 91-204 | 3 | (3,0) |
| Chemical Literature | 40-308 | 1 | (1,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Inorganic Chemistry | 40-402 | 3 | (3,0) |
| Advanced Topics Organic | 40-404 | 3 | (3,0) |
| Qualitative Organic Analysis | 40-408 | 4 | (1,6) |
| Inorganic Preparations | 40-412 | 2 | (1,2) |
| Elective | | 3 | (3,0) |
| Senior Research Project | 40-420 | 3 | |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 19 | |

TOTAL HOURS — 137

## B.A. CHEMISTRY MAJOR
### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| General Chemistry | 40-101 | 3 | (3,0) |
| General Chemistry Laboratory | 40-111 | 1 | (0,2) |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| German, French, or Russian | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Organic Chemistry | 40-207 | 3 | (3,0) |
| Organic Chemistry Laboratory | 40-217 | 1 | (0,3) |
| College Physics | 26-205 | 4 | (3,2) |
| Scientific German, or | 91-203 | 3 | (3,0) |
| French or Russian | 92-201 or 99-201 | | |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 16 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Quantitative Analysis | 40-300 | 4 | (2,4) |
| College Physics | 26-207 | 4 | (3,2) |
| Approved Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Chemistry Elective | | 3 | (3,0) |
| Public Speaking | 80-205 | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

Medical or dental candidates should take: 47-104 (Introduction to Zoology), 47-302 (Comparative Vertebrate Anatomy), and 47-401 (Embryology). It is also recommended that they take: 47-308 (Genetics), 47-402 (Descriptive Histology), and 47-403 (Mammalian Physiology); 51-201 (General Psychology) and 51-304 (Abnormal Psychology); and 30-131 and 30-132 (Analytical Geometry and Calculus) in lieu of 30-101 and 30-102 (Fundamental Mathematics); or 30-101 and 30-102 (Fundamental Mathematics) and 30-201 and 30-202 (Introduction to Calculus and Analytic Geometry).

## B.A. CHEMISTRY MAJOR

### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| General Chemistry | 40-102 | 3 | (3,0) |
| General Chemistry Laboratory | 40-112 | 1 | (0,2) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| German, French, or Russian | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Organic Chemistry | 40-208 | 3 | (3,0) |
| Organic Chemistry Laboratory | 40-218 | 1 | (0,3) |
| College Physics | 26-206 | 4 | (3,2) |
| Scientific German, or | 91-204 | 3 | (3,0) |
| French or Russian | 92-202 or 99-202 | | |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 16 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Survey of Physical Chemistry | 40-301 | 3 | (3,0) |
| Chemistry Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Chemistry Elective | | 3 | (3,0) |
| Chemistry Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 133

NOTE: Approved electives must be selected from the list of approved electives available from the Department of Chemistry.

Approved chemistry electives: 40-307 (Introductory Biochemistry), 40-309 (Special Topics in Analytical Chemistry), 40-310 (Survey of Nuclear Science), 40-312 (Chemical Bonding and Structure), 40-403 (Special Topics in Organic Chemistry), 40-404 (Advanced Topics in Organic Chemistry), 40-407 (Organic Preparations), and 40-408 (Qualitative Organic Analysis).

## CIVIL ENGINEERING MAJOR

### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| General Chemistry | 40-101 | 3 | (3,0) |
| General Chemistry Laboratory | 40-111 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-131 | 4 | (4,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| Graphic Science | 10-101 | 2 | (0,4) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| General Physics | 26-110 | 4 | (3,2) |
| Intermediate Calculus | 30-231 | 4 | (4,0) |
| Surveying | 10-205 | 4 | (3,2) |
| Nontechnical Elective | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 20 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Gneral Physics | 26-212 | 4 | (3,2) |
| Dynamics | 10-301 | 3 | (3,0) |
| Mechanics of Materials | 10-303 | 4 | (3,2) |
| Highway Engineering | 10-305 | 3 | (3,0) |
| Materials Laboratory | 10-307 | 1 | (0,3) |
| Geology for Engineers | 45-303 | 3 | (2,2) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 20 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Concrete Laboratory | 10-401 | 1 | (0,2) |
| Reinforced Concrete Design | 10-403 | 3 | (3,0) |
| Structural Analysis II | 10-405 | 3 | (2,2) |
| Fluid Mechanics | 10-407 | 4 | (3,2) |
| Soil Mechanics and Foundations | 10-409 | 3 | (3,0) |
| Technical Elective | | 3 | (3,0) |
| Senior Research Project | | 0 | |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 19 | |

*Represents semester hour credits, lectures, and laboratory hours in tha sequence.

## CIVIL ENGINEERING MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| General Chemistry | 40-102 | 3 | (3,0) |
| General Chemistry Laboratory | 40-112 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-132 | 4 | (4,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| Graphic Science | 10-102 | 2 | (0,4) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| General Physics | 26-211 | 4 | (3,2) |
| Differential Equations | 30-232 | 3 | (3,0) |
| Surveying | 10-206 | 4 | (3,2) |
| Statics | 10-202 | 3 | (2,2) |
| Photogrammetry | 10-204 | 1 | (0,2) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 20 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Computer Application for Civil Engineering | 10-312 | 1 | (1,0) |
| Highway Engineering | 10-306 | 3 | (2,2) |
| Structural Analysis I | 10-308 | 3 | (3,0) |
| Engineering Administration | 10-314 | 2 | (2,0) |
| Elements of Electrical Engineering | 20-308 | 3 | (2,2) |
| Nontechnical Elective | | 3 | (3,0) |
| Nontechnical Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 19 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Soils Mechanics Laboratory | 10-402 | 1 | (0,2) |
| Reinforced Concrete Design | 10-404 | 3 | (3,0) |
| Steel Design | 10-406 | 3 | (2,2) |
| Sanitary Engineering | 10-408 | 4 | (3,2) |
| Soil Mechanics and Foundations | 10-410 | 3 | (3,0) |
| Senior Research Project | 10-420 | 2 | |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 17 | |

TOTAL HOURS — 151

## EDUCATION MAJOR
### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Introduction to Botany | 47-103 | 4 | (3,2) |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| American History | 70-101 | 3 | (3,0) |
| General Psychology | 51-201 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Physical Science | | 4 | (3,2) |
| Social Studies | | 3 | (3,0) |
| §Music Appreciation | 54-205 | 3 | (3,0) |
| Personal and Community Health | 59-301 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Philosophy of Education | 50-301 | 3 | (3,0) |
| Educational Psychology | 50-302 | 3 | (3,0) |
| †Electives in Teaching Field | | 6 | |
| §Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Methods and Materials | 50-401 | 3 | (3,0) |
| Social Studies | 300-400 level | 3 | (3,0) |
| Electives in Teaching Field | | 6 | |
| Educational Tests and Measurements | 50-406 | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*—Represents semester hour credits, lectures, and laboratory hours in that sequence.

†—Student must decide upon his teaching-field major no later than beginning of junior year.

§—Student electing a foreign language will enroll for it during these semesters and defer Music Appreciation until the junior or senior year.

## EDUCATION MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Introduction to Zoology | 47-104 | 4 | (3,2) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| American History | 70-102 | 3 | (3,0) |
| Public Speaking | 80-205 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Physical Science | | 4 | (3,2) |
| Social Studies | | 3 | (3,0) |
| Art Appreciation | 54-206 | 3 | (3,0) |
| Introduction to Education | 50-201 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Child and Adolescent Development | 50-305 | 3 | (3,0) |
| Elective in Education | | 3 | (3,0) |
| Electives in Teaching Field | | 6 | |
| †Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Directed Teaching | 50-400 | 6 | |
| Approved Elective | 300-400 level | 3 | (3,0) |
| Electives | | 6 | |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 138

## ELECTRICAL ENGINEERING MAJOR

### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| General Chemistry | 40-101 | 3 | (3,0) |
| General Chemistry Laboratory | 40-111 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-131 | 4 | (4,0) |
| Engineering Orientation | 20-101 | 1 | (1,0) |
| Engineering Graphics | 20-103 | 2 | (0,4) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 16 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Intermediate Calculus | 30-231 | 4 | (4,0) |
| General Physics | 26-211 | 4 | (3,2) |
| Survey of American History | 70-101 | 3 | (3,0) |
| Introduction to Electrical Engineering | 20-201 | 3 | (3,0) |
| Computer Programming | 36-201 | 1 | (1,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 20 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Advanced Calculus | 30-321 | 3 | (3,0) |
| Electrical Laboratory | 20-301 | 1 | (0,2) |
| Introduction to Electronics | 20-305 | 3 | (3,0) |
| Linear Circuity Analysis | 20-309 | 3 | (3,0) |
| Applied Numerical Methods | 36-301 | 3 | (3,0) |
| Humanities Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 18 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Seminar | 20-409 | 1 | (1,0) |
| Electrical Laboratory | 20-411 | 1 | (0,2) |
| Electromagnetic Theory | 20-417 | 3 | (3,0) |
| Humanities Elective | | 3 | (3,0) |
| Professional Elective | | 3 | (3,0) |
| Professional Elective | | 3 | (3,0) |
| Professional Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 19 | |

PROFESSIONAL ELECTIVES IN ELECTRICAL ENGINEERING—

| | | | |
|---|---|---|---|
| Electronic Circuits | 20-401 | 3 | (3,0) |
| Electrical Measurements | 20-405 | 3 | (3,0) |
| Logical Design of Digital Computers | 20-407 | 3 | (3,0) |
| Circuit Networks | 20-413 | 3 | (3,0) |
| Automatic Control Systems | 20-415 | 3 | (3,0) |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

## ELECTRICAL ENGINEERING MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| General Chemistry | 40-102 | 3 | (3,0) |
| General Chemistry Laboratory | 40-112 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-132 | 4 | (4,0) |
| General Physics | 26-110 | 4 | (3,2) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR —

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Differential Equations | 30-232 | 3 | (3,0) |
| General Physics | 26-212 | 4 | (3,2) |
| Survey of American History | 70-102 | 3 | (3,0) |
| Introduction to Electrical Engineering | 20-202 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Advanced Calculus | 30-322 | 3 | (3,0) |
| Electrical Laboratory | 20-302 | 1 | (0,2) |
| *Technical Elective | | 3 | (3,0) |
| Electromechanical Energy Conversion | 20-310 | 5 | (5,0) |
| Public Speaking | 80-205 | 3 | (3,0) |
| Humanities Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 19 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Electrical Laboratory | 20-412 | 1 | (0,2) |
| Electromagnetic Theory | 20-418 | 3 | (3,0) |
| Humanities Elective | | 3 | (3,0) |
| Professional Elective | | 3 | (3,0) |
| Professional Elective | | 3 | (3,0) |
| Professional Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 17 | |

PROFESSIONAL ELECTIVES IN ELECTRICAL ENGINEERING—

| | | | |
|---|---|---|---|
| Electronic Systems | 20-402 | 3 | (3,0) |
| Electrical Power Systems | 20-408 | 3 | (3,0) |
| Circuit Networks | 20-414 | 3 | (3,0) |
| Automatic Control Systems | 20-416 | 3 | (3,0) |
| System Simulation | 20-419 | 3 | (3,0) |
| Senior Research Project | 20-420 | 3 | |

TOTAL HOURS — 144

*Must be approved by department head.

## ENGLISH MAJOR
### First Semester

### FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

### SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Survey of English Literature | 80-213 | 3 | (3,0) |
| European Civilization Since 1500 | 70-201 | 3 | (3,0) |
| Semantics, or | 80-210 | 3 | (3,0) |
| Mythology, or | 80-211 | | |
| The Bible as Literature | 80-212 | | |
| Elective | | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 17 | |

### JUNIOR YEAR—

| | | | |
|---|---|---|---|
| **Shakespeare, or | 80-317 | 3 | (3,0) |
| Shakespeare | 80-318 | | |
| **An Elective from Group B | | 3 | (3,0) |
| English Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

### SENIOR YEAR—

| | | | |
|---|---|---|---|
| **American Literature, or | 80-327 | 3 | (3,0) |
| American Literature to 1900 | 80-328 | | |
| **An Elective from Group A | | 3 | (3,0) |
| English Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.
**May be taken first or second semester.

# ENGLISH MAJOR
## Second Semester

### FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

### SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Survey of English Literature | 80-214 | 3 | (3,0) |
| European Civilization Since 1500 | 70-202 | 3 | (3,0) |
| Semantics, or | 80-210 | 3 | (3,0) |
| Mythology, or | 80-211 | | |
| The Bible as Literature | 80-212 | | |
| Elective | | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (3,0) |
| RPE | | 0 | (0,1) |
| | | 17 | |

### JUNIOR YEAR—

| | | | |
|---|---|---|---|
| **Chaucer, or | 80-301 | 3 | (3,0) |
| Milton | 80-319 | | |
| **An Elective from Group C | | 3 | (3,0) |
| English Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

### SENIOR YEAR—

| | | | |
|---|---|---|---|
| **An Elective from Group C | | 3 | (3,0) |
| English Elective | | 3 | (3,0) |
| English Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 136

## HISTORY MAJOR

### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| American National Government | 60-201 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| European Civilization Since 1500 | 70-201 | 3 | (3,0) |
| Economic Origins and Principles | 5-201 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| A Modern Language | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| History of England | 70-301 | 3 | (3,0) |
| United States Since 1900, or | 70-303 | 3 | (3,0) |
| Europe in the Twentieth Century, or | 70-305 | | |
| Social and Intellectual History of the United States | 70-313 | | |
| **Elementary Geography | 71-309 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| American Diplomatic History, or | 70-401 | 3 | (3,0) |
| Latin American History, or | 70-403 | | |
| Far East in Modern Times | 70-409 | | |
| Colonial America, or | 70-405 | 3 | (3,0) |
| Ancient World | 70-407 | | |
| Constitutional Law, or | 60-401 | 3 | (3,0) |
| International Politics, or | 60-405 | | |
| Political Theory | 60-407 | | |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in tha sequence.

**May be taken first or second semester.

## HISTORY MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| State and Local Government | 60-202 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| European Civilization Since 1500 | 70-202 | 3 | (3,0) |
| Economic Principles and Problems | 5-202 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| A Modern Language | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| History of England | 70-302 | 3 | (3,0) |
| United States Since 1900, or | 70-304 | 3 | (3,0) |
| Europe in the Twentieth Century, or | 70-306 | | |
| Social and Intellectual History of the United States | 70-314 | | |
| **One-semester history course | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| American Diplomatic History, or | 70-402 | 3 | (3,0) |
| Latin American History, or | 70-404 | | |
| Modern Russia | 70-410 | | |
| Colonial America, or | 70-406 | 3 | (3,0) |
| Middle Ages | 70-408 | | |
| Constitutional Law, or | 60-402 | 3 | (3,0) |
| International Politics, or | 60-406 | | |
| Political Theory | 60-408 | | |
| Elective | | 3 | (3,0) |
| *Senior Research Project or Approved Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 136

*Prerequisite is approval by department head and supervising professor.

## B.S. MATHEMATICS MAJOR
### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| General Chemistry | 40-101 | 3 | (3,0) |
| General Chemistry Laboratory | 40-111 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-131 | 4 | (4,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 16 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| General Physics | 26-211 | 4 | (3,2) |
| Intermediate Calculus | 30-231 | 4 | (4,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| German, French, or Russian | 91-101, 92-101, or 99-101 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 19 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Modern Algebra | 30-303 | 3 | (3,0) |
| Advanced Calculus | 30-321 | 3 | (3,0) |
| Applied Numerical Methods | 36-301 | 3 | (3,0) |
| German, French, or Russian | 91-201, 92-201, or 99-201 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Real Analysis | 30-401 | 3 | (3,0) |
| Theory of Numbers | 30-411 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

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*Represents semester hour credits, lectures, and laboratory hours in that sequence.

## B.S. MATHEMATICS MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| General Chemistry | 40-102 | 3 | (3,0) |
| General Chemistry Laboratory | 40-112 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-132 | 4 | (4,0) |
| General Physics | 26-110 | 4 | (3,2) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| General Physics | 26-212 | 4 | (3,2) |
| Differential Equations | 30-232 | 3 | (3,0) |
| Linear Algebra | 30-240 | 3 | (3,0) |
| French, German, or Russian | 91-102, 92-102, or 99-102 | 3 | (3,0) |
| **Computer Programming | 36-201 | 1 | (1,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 19 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Modern Geometry | 30-305 | 3 | (3,0) |
| Numerical Analysis | 30-318 | 3 | (3,0) |
| Advanced Calculus | 30-322 | 3 | (3,0) |
| German, French, or Russian | 91-202, 92-202, or 99-202 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| History of Mathematics | 30-412 | 3 | (3,0) |
| Topology | 30-414 | 3 | (3,0) |
| ***Complex Analysis or Senior Research Project | 30-422 or 30-420 | 3 | |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 137

**May be taken the first semester.

***The choice of these courses will be made with the approval of the head of the Department of Mathematics and supervising professor.

## B.A. MATHEMATICS MAJOR

### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| **Biology, Chemistry, or Physics | | 4 | (3,2) |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Introduction to Calculus and Analytic Geometry | 30-201 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 17 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Differential Equations | 30-232 | 3 | (3,0) |
| Mathematics Elective | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Mathematics Elective | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

**Must be followed the second semester by four semester hours of the same science. Physics 26-110 and 26-211 may be taken concurrently with 30-201 and 30-202 with permission of the heads of the Departments of Mathematics and Physics.

***The choice of these courses will be made with the approval of the head of the Department of Mathematics.

## B.A. MATHEMATICS MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Introduction to Calculus and Analytic Geometry | 30-202 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| Computer Programming | 36-201 | 1 | (1,0) |
| ***Approved Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Linear Algebra | 30-240 | 3 | (3,0) |
| Mathematics Elective | | 3 | (3,0) |
| Mathematics Elective | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Mathematics Elective | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| ***Approved Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| General Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 137

## MODERN LANGUAGE MAJOR
### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| A Modern Language | **101/201 | 3 | (3,0) |
| A Second Modern Language | **101 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| European Civilization Since 1500 | 70-201 | 3 | (3,0) |
| Major Modern Language | **201/301 | 3 | (3,0) |
| Continuation of 2nd Modern Language | **201 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Continuation of 2nd Modern Language | | 3 | (3,0) |
| Major Modern Language, or | **301/305 | | |
| Elective in Major Modern Language | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Continuation of 2nd Modern Language | | 3 | (3,0) |
| Elective in Major Modern Language | | 3 | (3,0) |
| Elective in Major Modern Language or Related Area | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

**Spanish-90; German-91; French-92; Portuguese-93; Russian-99.

## MODERN LANGUAGE MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| A Modern Language | **102/202 | 3 | (3,0) |
| A Second Modern Language | **102 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| European Civilization Since 1500 | 70-202 | 3 | (3,0) |
| Major Modern Language | **202/302 | 3 | (3,0) |
| Continuation of 2nd Modern Language | **202 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Continuation of 2nd Modern Language | | 3 | (3,0) |
| Major Modern Language, or | **302/306 | | |
| Elective in Major Modern Language | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | |
|---|---|---|
| Continuation of 2nd Modern Language | 3 | (3,0) |
| Elective in Major Modern Language | 3 | (3,0) |
| Elective in Major Modern Language or Related Area | 3 | (3,0) |
| Elective | 3 | (3,0) |
| Elective | 3 | (3,0) |
| 2nd Year Advanced ROTC | 1 | (3,0) |
| | 16 | |

TOTAL HOURS — 136

**Spanish-90; German-91; French-92; Portuguese-93; Russian-99.

## PHYSICAL EDUCATION MAJOR

### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| Introduction to Physical Education | 59-201 | 3 | (3,0) |
| Music Appreciation | 54-205 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | 59-101 | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Physical Science | | 4 | (3,2) |
| Introduction to Public Speaking | 80-205 | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Elective in Education | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | 59-200 | 0 | (0,2) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Approved Elective | | 3 | (3,0) |
| Human Anatomy | 47-303 | 3 | (3,0) |
| Human Anatomy Laboratory | 47-305 | 1 | (0,2) |
| Personal and Community Health | 59-301 | 3 | (3,0) |
| Sports II | 59-306 | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| RPE | 59-200 | 0 | (0,2) |
| | | 18 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Child and Adolescent Development | 50-305 | 3 | (3,0) |
| Organization and Administration of Physical Education | 59-401 | 3 | (3,0) |
| Adaptive Physical Education | 59-403 | 2 | (2,0) |
| Health Education | 59-405 | 3 | (3,0) |
| Tests and Measurements in Physical Education | 59-412 | 2 | (2,0) |
| Kinesiology | 59-414 | 2 | (2,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

## PHYSICAL EDUCATION MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| Introduction to Zoology | 47-104 | 4 | (3,2) |
| Art Appreciation | 54-206 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | 59-102 | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Physical Science | | 4 | (3,2) |
| Sports I | 59-204 | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Elective in Education | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | 59-200 | 0 | (0,2) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Approved Elective | | 3 | (3,0) |
| Human Physiology | 47-304 | 3 | (3,0) |
| Human Physiology Laboratory | 47-306 | 1 | (0,2) |
| Basketball Theory | 59-303 | 2 | (2,1) |
| Gymnastics and Tumbling | 59-308 | 2 | (1,2) |
| Approved Elective | | 3 | (3,0) |
| Elective in Education | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| RPE | 59-200 | 0 | (0,2) |
| | | 18 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Care and Prevention of Athletic Injuries | 59-402 | 2 | (2,0) |
| Football Theory | 59-407 | 2 | (2,0) |
| Physiology of Exercise | 59-416 | 3 | (2,2) |
| Directed Teaching | 59-400 | 6 | |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 14 | |

TOTAL HOURS — 138

## PHYSICS MAJOR
### First Semester

### FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| General Chemistry | 40-101 | 3 | (3,0) |
| General Chemistry Laboratory | 40-111 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-131 | 4 | (4,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| Modern Physics Lectures | 26-101 | 1 | (1,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

### SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| General Physics | 26-211 | 4 | (3,2) |
| Intermediate Calculus | 30-231 | 4 | (4,0) |
| German, French, or Russian | 91-101, 92-101, or 99-101 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 19 | |

### JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Optics | 26-309 | 4 | (3,2) |
| Mechanics | 26-319 | 3 | (3,0) |
| Electromagnetism | 26-311 | 3 | (3,0) |
| Advanced Calculus | 30-321 | 3 | (3,0) |
| German, French, or Russian | 91-201, 92-201, or 99-201 | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 18 | |

### SENIOR YEAR—

| | | | |
|---|---|---|---|
| Quantum Mechanics | 26-405 | 3 | (3,0) |
| Modern Physics | 26-401 | 3 | (3,0) |
| Advanced Laboratory Physics | 26-403 | 1 | (0,2) |
| Research Planning | 26-419 | 1 | |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 16 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

## PHYSICS MAJOR
### Second Semester

### FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| General Chemistry | 40-102 | 3 | (3,0) |
| General Chemistry Laboratory | 40-112 | 1 | (0,2) |
| Analytic Geometry and Calculus | 30-132 | 4 | (4,0) |
| General Physics | 26-110 | 4 | (3,2) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

### SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| General Physics | 26-212 | 4 | (3,2) |
| Differential Equations | 30-232 | 3 | (3,0) |
| German, French, or Russian | 91-102, 92-102, or 99-102 | 3 | (3,0) |
| Computer Science | 36-201 | 1 | (1,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 19 | |

### JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Electronics | 26-318 | 4 | (3,2) |
| Thermodynamics | 26-310 | 3 | (3,0) |
| Electromagnetism | 26-312 | 3 | (3,0) |
| Advanced Calculus | 30-322 | 3 | (3,0) |
| German, French, or Russian | 91-202, 92-202, or 99-202 | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 17 | |

### SENIOR YEAR—

| | | | |
|---|---|---|---|
| Quantum Mechanics | 26-406 | 3 | (3,0) |
| Modern Physics | 26-402 | 3 | (3,0) |
| Senior Research Project | 26-420 | 3 | |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 139

## POLITICAL SCIENCE MAJOR

### First Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| **Biology, Chemistry, or Physics | | 4 | (3,2) |
| Survey of American History | 70-101 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-201 | 3 | (3,0) |
| Economic Origins and Principles | 5-201 | 3 | (3,0) |
| European Civilization Since 1500 | 70-201 | 3 | (3,0) |
| ***American National Government | 60-201 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 17 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| International Law | 60-301 | 3 | (3,0) |
| American Foreign Relations | 60-303 | 3 | (3,0) |
| Public Administration | 60-305 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Constitutional Law | 60-401 | 3 | (3,0) |
| International Politics | 60-405 | 3 | (3,0) |
| Political Theory | 60-407 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (3,0) |
| | | 17 | |

*Represents semester hour credits, lectures, and laboratory hours in that sequence.

**Physics open only to those who score in upper 75% on Mathematics Achievement Test.

***Available to freshmen except political science majors.

## POLITICAL SCIENCE MAJOR

### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| Survey of American History | 70-102 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 18 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Economic Principles and Problems | 5-202 | 3 | (3,0) |
| State and Local Government | 60-202 | 3 | (3,0) |
| European Civilization Since 1500 | 70-202 | 3 | (3,0) |
| A Modern Language | | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 17 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| International Organization, or | 60-302 | 3 | (3,0) |
| Problems in International Law | 60-308 | | |
| American Political Parties | 60-304 | 3 | (3,0) |
| Comparative Politics | 60-307 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Constitutional Law | 60-402 | 3 | (3,0) |
| International Politics, or | 60-406 | 3 | (3,0) |
| ****Urban Politics | 60-413 | | |
| Political Theory | 60-408 | 3 | (3,0) |
| Elective | | 3 | (3,0) |
| Political Science Elective or Senior Research Project | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 1 | (3,0) |
| | | 16 | |

TOTAL HOURS — 136

****Urban Politics open to seniors in all departments and second semester political science juniors.

## PSYCHOLOGY MAJOR
### First Semester

| | | | |
|---|---|---|---|
| FRESHMAN YEAR— | | | |
| Composition and Literature | 80-101 | 3 | (3,0)* |
| Fundamental Mathematics | 30-101 | 3 | (3,0) |
| Survey of American History | 70-101 | 3 | (3,0) |
| German or French | 91-101 or 92-101 | 3 | (3,0) |
| General Psychology | 51-201 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |
| SOPHOMORE YEAR— | | | |
| Major British Writers | 80-201 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| European Civilization Since 1500 | 70-201 | 3 | (3,0) |
| German or French | 91-201 or 92-201 | 3 | (3,0) |
| Research Design in Psychology | 51-203 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |
| JUNIOR YEAR— | | | |
| Experimental Psychology I | 51-301 | 3 | (3,0) |
| Theories of Personality | 51-306 | 3 | (3,0) |
| Introduction to Philosophy | 52-201 | 3 | (3,0) |
| Approved Fine Arts Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 2 | (2,0) |
| | | 17 | |
| SENIOR YEAR— | | | |
| Social Psychology | 51-305 | 3 | (3,0) |
| Learning and Motivation | 51-403 | 3 | (3,0) |
| Tests and Measurements | 50-406 | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| 2nd Year Advanced ROTC | | 2 | (2,0) |
| | | 17 | |

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*Represents semester hour credits, lectures, and laboratory hours in that sequence.

## PSYCHOLOGY MAJOR
### Second Semester

FRESHMAN YEAR—

| | | | |
|---|---|---|---|
| Composition and Literature | 80-102 | 3 | (3,0) |
| Fundamental Mathematics | 30-102 | 3 | (3,0) |
| Survey of American History | 70-102 | 3 | (3,0) |
| German or French | 91-102 or 92-102 | 3 | (3,0) |
| Introduction to Sociology | 53-201 | 3 | (3,0) |
| 1st Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,2) |
| | | 17 | |

SOPHOMORE YEAR—

| | | | |
|---|---|---|---|
| Major British Writers | 80-202 | 3 | (3,0) |
| Biology, Chemistry, or Physics | | 4 | (3,2) |
| European Civilization Since 1500 | 70-202 | 3 | (3,0) |
| German or French | 91-202 or 92-202 | 3 | (3,0) |
| Human Growth and Development | 50-310 | 3 | (3,0) |
| 2nd Year Basic ROTC | | 2 | (2,0) |
| RPE | | 0 | (0,1) |
| | | 18 | |

JUNIOR YEAR—

| | | | |
|---|---|---|---|
| Experimental Psychology | 51-302 | 3 | (3,0) |
| Abnormal Psychology | 51-304 | 3 | (3,0) |
| Approved Science Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| 1st Year Advanced ROTC | | 1 | (1,0) |
| | | 16 | |

SENIOR YEAR—

| | | | |
|---|---|---|---|
| Applied Psychology | 51-404 | 3 | (3,0) |
| History and Systems of Psychology | 51-405 | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Approved Elective | | 3 | (3,0) |
| Senior Research Project | 50-420 | 3 | |
| 2nd Year Advanced ROTC | | 1 | (1,0) |
| | | 16 | |

TOTAL HOURS — 136

# Department of Aerospace Studies

Professor: Crabbe
Assistant Professors: Bailey, Mavis, Johnson, Slaney, Tillman, Williams, Hannan, Hayes, DeMarco, Loren

The Citadel Air Force ROTC cadet course of instruction in Aerospace Studies features a wide variety of instruction and training opportunities. During the freshman and sophomore years the curriculum is designed to provide students with an understanding of aerospace power's relation to national defense as well as aerospace power's past, present, and future role in world affairs. The course covers the nature of war and traces the development of aerospace power.

During the junior and senior years the Air Force ROTC program draws on many academic disciplines and deals with professionalism in leadership and management. It includes the meaning of professionalism, professional responsibility, the military justice system, leadership—its functions and practice, management principles and functions, and problem solving.

## Course of Instruction

7-100. *World Military Systems* Four Credit Hours
(Freshman Year)

An introductory course exploring the doctrine, mission, and organization of the defense establishment of the United States, with emphasis on the mission of the U.S. Air Force.

The course begins with a discussion of the doctrine, mission, and organization of the United States Air Force. It continues with a discussion of the U.S. strategic offensive and defensive forces and covers in detail their mission and function to include the employment of nuclear weapons and civil defense. The role of the U.S. general purpose and aerospace support forces is then covered in relation to the tactical air forces; special attention is devoted to employment in limited war. Two class hours per week are required.

7-200. *World Military Systems* Four Credit Hours
(Sophomore Year)

A continuation of the General Military Course which deals with the role of U.S. military forces in the contemporary world. This includes a survey of the defense policies of the United States and a discussion of general war and the nature and context of limited war. The second semester is devoted to the policies and strategies of the Soviet Union and Communist China, the role of alliances in the U.S. defense policies, and a study of defense organization and the decision-making process. This study includes the organization and function of the Department of Defense, the role of the military in national policy, and the elements and process of defense decision making. Two class hours per week are required.

7-300. *Growth and Development of Aerospace Power* Three Credit Hours
(Junior Year)

A study of the changing nature of military conflict; development of air power in the United States; mission and organization of the United States Air Force within the Department of Defense; Air Force concepts, doctrine, and employment; astronautics and space operations; and the future of aerospace power. Included are the United States space programs, vehicles, systems, and problems in space exploration. Three class hours per week are required.

7-400. *The Professional Officer* Three Credit Hours
(Senior Year)

A study of professionalism, leadership, and management. Includes the meaning of professionalism; professional responsibilities; the military justice system; leadership theory, functions, and practices; management principles and functions; problem solving; and management tools, practices, and controls. Three class hours per week are required.

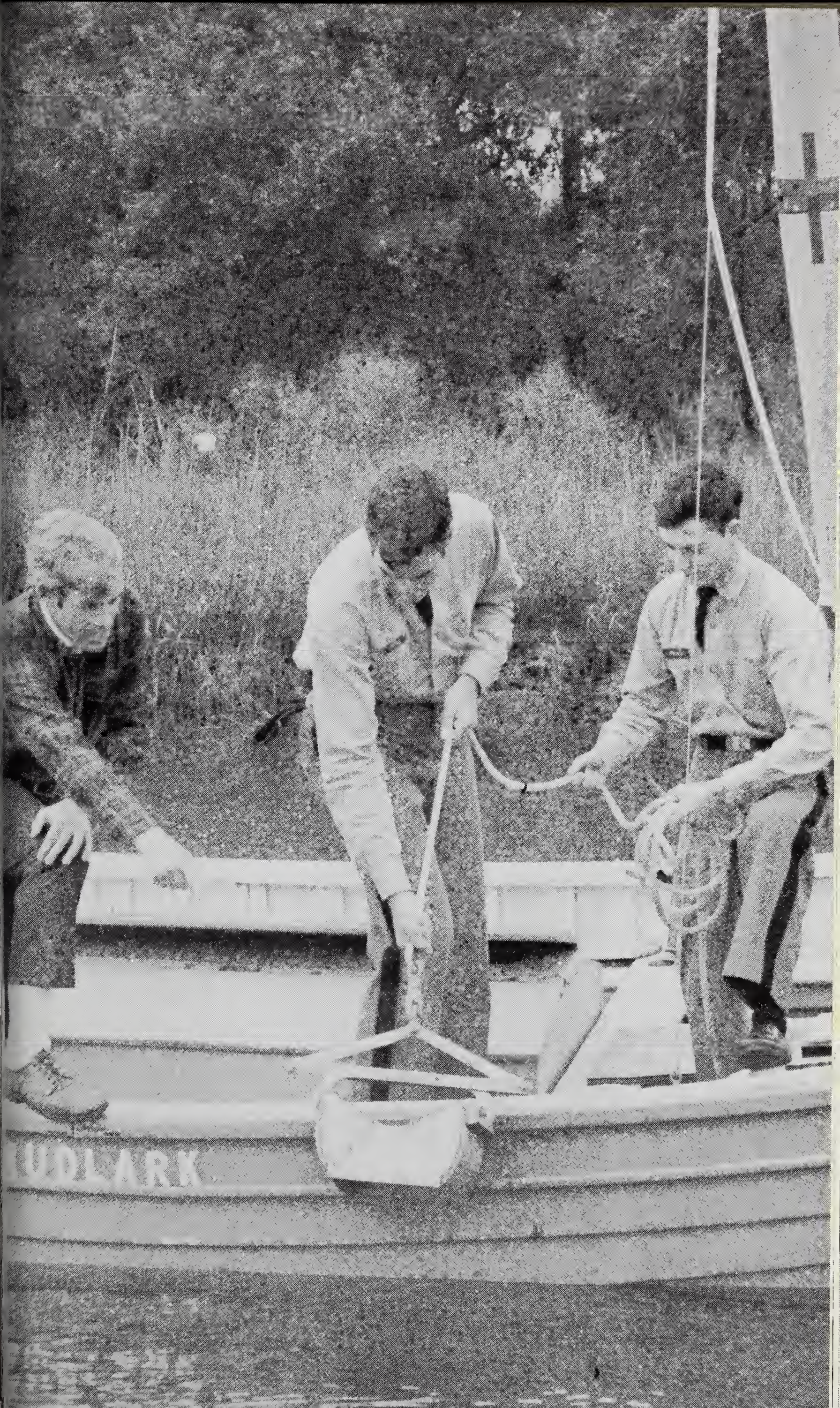
7-410. *Flight Instruction Program (Ground School)* One Credit Hour

Flight instruction program ground school elective course offered during the first semester. This course includes ground training in theory of flight, meterology, Federal Aviation regulations, navigation procedures, communications techniques, general services, flight safety practices, and flight planning. Satisfactory completion of the Federal

Aviation Administration written private pilot's examination administered by the FAA is required for credit.

7-411. *Flight Instruction Program (Flying Training)* Two Credit Hours

Flight instruction program flying training laboratory elective course for second semester AS/MS 400 enrolled cadets who are physically and aptitude qualified in pilot category. This course includes inflight instruction consisting of dual and solo flights within the local area and cross-country flights with examination and certification by the Federal Aviation Administration. Cadets who complete this course may be awarded a private pilot's certificate upon completion of training.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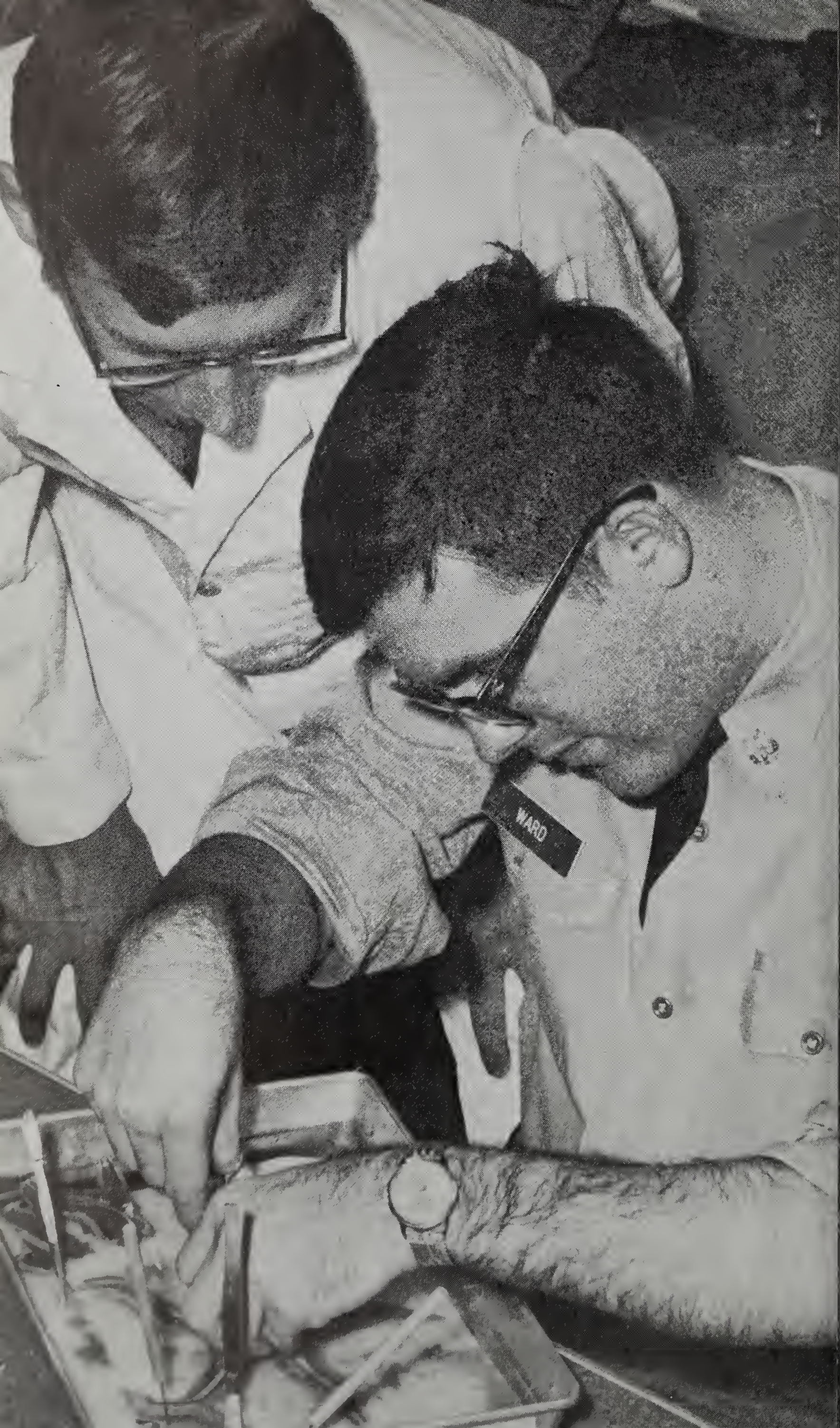

WARD

# Department of Biology

Professor: Reed
Associate Professors: Baldwin, Runey, Crosby
Assistant Professors: Kelley, Seabury, Bowman, Forsythe, Porcher, Ezell, Wallace
Visiting Professor: Timmerman

Biology is the study of living organisms. The Biology Department is structured to offer courses which give the student a better understanding of himself, his relationship with his environment, and the diversity of life. The core curriculum is arranged to provide courses in physiology, field biology, descriptive biology, and developmental biology which meet the needs of both major and non-major groups. Enrichment courses with minimum prerequisites are offered in the summer and evening programs for interested individuals.

The flexibility of the core curriculum permits majors to prepare themselves for careers in biology, medicine, dentistry, veterinary science, secondary school science teaching, social work, and wildlife and/or conservation. A special three-year program for exceptional students can be arranged to meet the minimum requirements of specific professional schools.

The Biology Department participates in the graduate program of The Citadel, offering a major or minor in biology for the Master of Arts in Teaching (MAT) degree. Individuals interested in these programs should consult the Graduate School Catalogue.

## Course Descriptions for Biology

47-103. *Introduction to Botany* Four Credit Hours

An introduction to the plant kingdom; the structure, life processes, reproduction, heredity, evolution, classification, and biological significance of plants.

Lecture: three hours; laboratory: two hours.

47-104. *Introduction to Zoology* Four Credit Hours

An introduction to the animal kingdom; the structure, life processes, reproduction, heredity, evolution, classification, and biological significance of animals.

Lecture: three hours; laboratory: two hours.

47-205. *Cell Biology* Three Credit Hours

Prerequisites: 47-103 and 47-104.

Elective to all majors

An introduction to the morphological, biochemical, and biophysical properties of protoplasm and their significance in the life processes.

Lecture: three hours.

47-208. *Evolution* Three Credit Hours

Prerequisites: 47-103 and 47-104.

Elective to all majors

A basic course in the concepts of evolution and population dynamics. The history of evolutionary thought, the processes of organic evolution and systematics are considered.

Lecture: three hours.

47-301. *Invertebrate Zoology* Four Credit Hours

Prerequisite: 47-104.

Elective to all majors

A general study of the invertebrate animals, including taxonomy, morphology, and ecology.

Lecture: two hours; laboratory: four hours.

47-302. *Comparative Vertebrate Anatomy* Four Credit Hours

Prerequisite: 47-104.

Elective to all majors

Comparative anatomy of certain vertebrate forms.

Lecture: two hours; laboratory: four hours.

47-303. *Human Anatomy* Three Credit Hours

Prerequisite: 47-104.

Required of majors in physical education and elective to majors other than biology majors.

Foundation material in mammalian anatomy which has been designed to give an understanding of basic human anatomy.

Lecture: three hours.

47-304. *Human Physiology* Three Credit Hours

Prerequisite: 47-104.

Elective to majors other than biology majors.

An introduction of the basic physics and chemistry of life, including a study of the machinery of the regulatory mechanisms of the human body.

Lecture: three hours.

47-305. *Human Anatomy Laboratory* One Credit Hour

Prerequisite: 47-104.

Corequisite: 47-303.

Elective to majors other than biology majors.

Laboratory exercises to illustrate the relationships of structure of mammalian anatomy.

Laboratory: two hours.

47-306. *Human Physiology Laboratory* One Credit Hour

Prerequisite: 47-104.

Corequisite: 47-304.

Elective to majors other than biology majors.

The experimental approach will be emphasized, and students will conduct experiments demonstrating the various physiological processes of life.

Laboratory: two hours.

47-308. *Genetics* Three Credit Hours

Prerequisite: 47-104 or approval of department head.

Elective to all majors.

This course presents in a relatively nontechnical manner the basic facts essential for an understanding of the mode of inheritance in plants and animals with the major emphasis on animals. It is strongly suggested by many medical colleges.

Lecture: two hours; laboratory: two hours.

47-310. *Microbiology* Four Credit Hours

Prerequisite: 47-103 or approval of department head.

Elective to all majors.

A general study of microorganisms and their importance to man with special emphasis on their fundamental life processes. Includes a brief introduction to epidemiology and immunology.

Lecture: three hours; laboratory: three hours.

47-312. *Biostatistics* Three Credit Hours

Prerequisite: 30-102 or 30-119 or approval of department head.

Elective to all majors.

An elementary statistics course with an introduction to fundamental procedures in collection, analysis, and presentation of biological data. It includes measures of central value and dispersion, sampling, and tests of significance in research studies.

Lecture: three hours.

47-314. *The Vascular Flora of South Carolina* Four Credit Hours

Prerequisite: 47-103 or approval of instructor.

An introductory study of the native vascular flora of South Carolina, emphasizing the identification and collection of native plants. The student will have practice in use of taxonomic keys and in preparation of specimens for The Citadel Herbarium.

Lecture: two hours; laboratory: four hours.

This course formerly was numbered 47-210 (Plant Taxonomy).

47-315. *Plant Morphology* Four Credit Hours

Prerequisite: 47-103.

Elective to all majors.

The study of the external forms, life histories, evolutionary trends, and economic importance of the lower and higher members of the plant kingdom.

Lecture: two hours; laboratory: four hours.

47-316. *Mycology* Four Credit Hours

Prerequisite: 47-103.

A study of the morphology, classification, and ecology of the fungi commonly found in the coastal area of South Carolina.

Lecture: three hours; laboratory: three hours.

47-321. *General Entomology* Three Credit Hours

Prerequisite: 47-104.

An introduction to the study of insects and closely related arthropods, including their ecology, physiology, morphology, taxonomy, adaptations, and immature stages. Laboratory studies will emphasize field collection methods and curatorial techniques.

Lecture: two hours; laboratory: three hours.

47-401. *Embryology* Four Credit Hours

Prerequisite: 47-104.

Elective to all majors.

Embryology of representative vertebrates, including the amphibian and bird, and additional material on mammals.

Lecture: two hours; laboratory: four hours.

47-402. *Descriptive Histology* Three Credit Hours

Prerequisite: 47-104.

Elective to all majors.

A detailed study of the chief types of animal tissues and a description of the histology of organs. Laboratory work includes microscopic study of cells, tissues, and organs of animals, and training in the preparation of microscopic slides.

Lecture: two hours; laboratory: four hours.

47-403. *Mammalian Physiology* Four Credit Hours

Prerequisites: 47-104 and 40-208 (Organic Chemistry)

Elective to all majors.

A systematic study of the general physiology of skin, skeleton, muscle, nervous system, special senses, digestive, circulatory, and respiratory systems, kidney function, hormonal control, and reproduction.

Lecture: three hours; laboratory: three hours.

47-404. *Plant Physiology* Four Credit Hours

Prerequisites: 47-103 and 47-205.

Elective to all majors.

A comprehensive study of the physiological processes of living plants. This course is designed to include both inorganic and organic metabolism while emphasizing the relationships of these processes to the entire plant.

Lecture: three hours; laboratory: three hours.

47-405. *General Parasitology* Three Credit Hours

Prerequisite: 47-104.

Elective to all majors.

Taxonomy, morphology, adaptation, and ecology of parasites affecting man and domestic animals. Life history, vectors, and controls are emphasized.

Lecture: two hours; laboratory: two hours.

47-406. *Ecology* Three Credit Hours

Prerequisite: 47-104.

Elective to all majors.

An introduction to the study of biological interrelationships and the effects of the environment on the structure and function of animal populations. Laboratory will emphasize methods and materials of ecological investigations.

Lecture: two hours; laboratory: two hours.

47-408. *Ornithology* Four Credit Hours

Prerequisite: 47-104.

A study of the structure, function, and ecology of birds. Field trips and bird specimens will give students a working knowledge of birds common to South Carolina.

Lecture: two hours; laboratory: four hours.

47-409. *Marine Biology* Four Credit Hours

Prerequisites: 47-103 and 47-104. 47-312 is recommended but not required.

Elective to all juniors and seniors.

The lectures cover major ecological factors and the fundamentals of oceanography. Laboratory work stresses the familiarities with species, taxonomic methods, sampling procedures, experimental design, use of equipment, and data handling.

Lecture: two hours; laboratory: four hours from 1-5 on Monday or Wednesday.

47-410. *Vertebrate Natural History* Three Credit Hours

Prerequisite: 47-104.

An introduction to the classification, ecology, evolution, and distribution of the vertebrates. Laboratory with emphasis on identification and field study techniques, especially with respect to the vertebrates of South Carolina.

Lecture: two hours; laboratory: three hours.

47-411. *Senior Seminar* One Credit Hour

Required of all biology majors.

A group study of current topics of biological interest.

Lecture: one hour.

47-413. *Comparative Physiology* Four Credit Hours

Prerequisite: 47-104.

This course deals with the function and interrelationships of the physiological systems in invertebrate and vertebrate organisms. Major emphasis is placed on the role of these systems in the adaptation of organisms to different environmental conditions.

Lecture: three hours; laboratory: three hours.

47-418. *Plant Anatomy* Four Credit Hours

Prerequisite: 47-103.

An examination of cell types and tissue systems found in the vegetative and reproductive organs of vascular plants with reference to their origin, classification, and function. The laboratory will include practice in the methods and procedures of plant microtechnique.

Lecture: two hours; laboratory: four hours.

47-420. *Senior Research Project* Three Credit Hours

Prerequisite: permission of department head and supervising instructor.

Independent study in undergraduate research for serious students planning graduate study.

MARK CLARK HALL

# Department of Business Administration

Professors: Adden, Mettler, Young
Associate Professors: Infinger, Whitney, Wilson, Masters, Stockton, Buckley, Bunch
Assistant Professors: Lucas, Marjenhoff, Wittschen, Rebber, Mahoney, Brown, Bernthal, Dobbs, Legare, Poore, McAlhany, Craig, Taylor

Modern business has become so large in the size of industrial units and so complex in organization that a mastery of its theory and practice can no longer be acquired through apprenticeship. Today no single industry or business can give so adequate a training to its beginners as can be obtained in the department of business administration of a good college. Such college training is now considered the best method of equipping a man for success as a business and economic leader.

The purpose of the Department of Business Administration is to prepare the student to take his place in a business enterprise with such general knowledge of business that he can forego many of the years of experience which would be required of an apprentice, to prepare him to enter in full standing the graduate schools of business administration, to pursue further professional business studies, and to take his place in economic society as does a professional man in other fields of endeavor with sufficient knowledge to make sound decisions on economic problems.

The courses described below are not all pure business courses; rather they are designed to offer instruction in subjects commonly given in schools of arts and science, in schools of social science, and in schools of business administration.

5-201. *Economic Origins and Principles* Three Credit Hours

Required of all business administration sophomores.

A study of the origins of capitalism and the development of economic institutions; an introduction to economic principles, including an analysis of the determination of national income and its fluctuations, an introduction to money, banking, and government finance.

5-202. *Economic Principles and Problems* Three Credit Hours

Prerequisite: 5-201.

Required of all business administration sophomores.

A study of value and price, including factors affecting short- and long-run adjustments of the individual firm with respect to prices, costs, and levels of production; value and price determination; market adjustments in competition and monopoly; distribution of income; and current economic problems.

5-205. *Business Statistics I* Three Credit Hours

Prerequisite: completion of required freshman mathematics.

Required of all business administration sophomores.

This course deals with the organization of statistical inquiry and the presentation of its results in tabular and graphic form. Also covered are frequency distributions (with emphasis on the normal), measures of central tendencies, measures of dispersion, theories of sampling and probability, time series, and index numbers.

5-206. *Business Statistics II* Three Credit Hours

Prerequisite: 5-205.

Elective for business administration majors and others.

A continuation of 5-205, including an introduction to T, Poisson, and Chi-square distributions, tests of significance, regression and correlation analysis, simple and multiple correlation, as well as a more sophisticated exploration of sampling and probability theory.

5-211. *Accounting Principles and Practice I* Three Credit Hours

Required of all business administration sophomores.

A study of the fundamentals of accounting, including the analysis and recording of business transactions and the preparation of financial statements; practical problems given in the laboratory.

Lecture: two hours; laboratory: two hours.

Formerly listed as 5-303.

5-212. *Accounting Principles and Practice II* Three Credit Hours

Prerequisite: 5-211.

Required of all business administration sophomores.

A continuation of 5-211 with emphasis on partnerships, corporations, cost accounting theory, modern methods of data processing, and the statement of sources and application of funds.

Lecture: two hours; laboratory: two hours.

Formerly listed as 5-304.

5-300. *Intermediate Accounting* Three Credit Hours

Prerequisite: 5-212.

Required of all business administration juniors.

An analysis of the balance sheet and the income statement with particular emphasis on the technique of evaluation of items comprising these statements; practical problems given in the laboratory.

Lecture: two hours; laboratory: two hours.

Formerly listed as 5-400.

5-305. *Business Law I* Three Credit Hours

Required of all business administration juniors.

A study of the law as it relates to business, including court procedure, cases, decisions, and the Uniform Commercial Code, with primary emphasis on contracts and negotiable instruments.

5-306. *Business Organization and Finance* Three Credit Hours

Prerequisites: 5-300 and 5-305.

Required of all business administration juniors.

A survey of forms of business organization and of business financial policies and methods of planning and control; an analysis of the factors affecting the capital structure of corporations and the proper use of different types of securities; budgetary procedures.

5-307. *Principles of Labor* Three Credit Hours

Prerequisite: 5-202.

Required of all business administration juniors.

An analysis of the worker's position in modern industry and the effects of industrial production on the worker's social position; introduction to the problems of wages, hours, working conditions, child labor, industrial accidents, unemployment, trade unions, and collective bargaining; economic problems of the worker under current labor legislation.

5-308. *General Insurance* Three Credit Hours

Elective for business administration majors and others.

A course in predictable business risks and the methods of minimizing these risks through insurance; intelligent planning of a program of coverages, and rates of life, fire, casualty, marine insurance, and fidelity and surety bonds.

5-309. *Marketing Principles* Three Credit Hours

Prerequisite: 5-202.

Required of all business administration juniors.

The activities necessary to effect the distribution of goods from producer to consumer, consumption and consumer behavior, the marketing institutions, the marketing functions, examination of important marketing policy and problem areas.

5-310. *Foreign Trade* Three Credit Hours

Prerequisite: 5-202

Elective for business administration majors.

The channels of distribution used in exporting and importing, the theory of international trade, foreign trade promotion activities; the commercial organization and policies governing foreign trade practices; trade methods and problems; financial arrangements.

5-311. *Government Finance* Three Credit Hours

Prerequisite: 5-202.

Required of all business administration juniors.

A study from the point of view of the businessman of the amount and purposes of government expenditures; scope of government financial activity; public budgets; principles of public borrowing; sources of revenue; theories of tax distribution; general principles and practices of property taxes, commodity taxes, income taxes, corporation and other business taxes.

5-312. *Taxation* Three Credit Hours

Prerequisite: 5-300.

Required of all business administration juniors.

A study of the basic principles of income taxation, including a thorough analysis of the present Federal law dealing both with persons and corporations.

5-314. *Intermediate Economics* Three Credit Hours

Prerequisite: 5-202.

Elective for business administration majors and others.

A course designed to give the student a comprehensive understanding of national income, its measurement and analysis, including a study of business cycles, economic growth, and economic policies.

5-316. *Communicating in Business* Three Credit Hour

Prerequisite: 5-202.

Elective for business administration majors and others.

A study of communication in business as related primarily to the writin of business reports, research procedures, and business letters. The cours is designed to stress clarity, conciseness, and logical presentation.

5-318. *Business Law II* Three Credit Hours

Prerequisite: 5-305.

Elective for business administration majors and others.

A continutation of Business Law I, 5-305, with emphasis on creditors' rights, agency and employment, and personal and real property.

5-330. *Personal Finance* Three Credit Hours

Elective for non-business majors.

A course dealing with the various aspects of family finance, including budgeting, savings programs, insurance protection, installment buying, home planning and financing, investments in stocks and bonds, and estate planning.

5-401. *Cost Accounting* Three Credit Hours

Prerequisite: 5-300.

Elective for business administration majors.

A course in the principles of industrial accounting, including the accounting for materials, labor, and overhead under the job-order, process, and standard cost systems; practical problems given in the laboratory.

Lecture: two hours; laboratory: two hours.

Formerly listed as Industrial Accounting.

5-402. *Advanced Accounting Problems* Three Credit Hours

Prerequisite: 5-300.

Elective for business administration majors.

A study of advanced accounting problems, including the technical procedures in the organization and liquidation of partnerships; special problems in mergers and consolidations, estates, trusts, and receiverships; practice problems done in the laboratory.

Lecture: two hours; laboratory: two hours.

5-403. *Corporate Financial Management* Three Credit Hours

Prerequisites: 5-300 and 5-306.

Required of all business administration seniors.

Principles and practices of the financing of non-financial corporations; emphasis on the role of the finance executive in a business organization; problems and cases to demonstrate solutions to managerial decisions involving cash flow and capital structure analysis.

5-404. *Investments* Three Credit Hours

Prerequisite: 5-403.

Elective for business administration majors.

A study in personal finance and security analysis; buying and selling procedure; stock exchanges; and the relative merits of the various types of securities as an investment or speculation.

5-405. *Marketing Management* Three Credit Hours

Prerequisite: 5-309.

Required of all business administration seniors.

Marketing management primarily for the manufacturer; planning the product; planning for promotion; investigation of the market; pricing and price policy; planning the sales organization; management of sales personnel.

5-406. *Transportation* Three Credit Hours

Prerequisite: 5-405.

Elective for business administration majors.

A study of the history, geography, and economics of all forms of transportation; transport pricing; public regulations; public policy; current problems such as competition between modes of transportation.

5-407. *Money and Banking* Three Credit Hours

Prerequisite: 5-311.

Required of all business administration seniors.

The nature and functions of money; the various monetary standards; the development of our monetary system; the factors affecting the value of money; methods and objectives of money and credit control; international exchange; analysis of recent developments in money and credit.

5-408. *Bank Management* Three Credit Hours

Prerequisite: 5-407.

Elective for business administration majors.

A study of the development and structure of the commercial banking system; a description and analysis of the operations of our commercial banks and an investigation of the techniques and principles followed by commercial banks in the performance of their many functions.

5-409. *Personnel Management* Three Credit Hours

Prerequisite: 5-307.

Required of all business administration seniors.

The principles and practices in the management of employees; introducing positive stimuli into industrial endeavors and promoting the industrial efficiency of labor, treating such factors as selection and placement, training programs, job analysis, labor turnover, merit rating, job evaluation, and wage analysis.

5-410. *Production Management* Three Credit Hours

Prerequisites: 5-202, 5-205, and 5-212.

Required of all business administration seniors.

The problems of the production manager; location and design of plants; internal and external transportation; inventory control; methods of measuring activities of personnel; incentives, efficiencies, budgets, and organization.

5-416. *Auditing* Three Credit Hours

Prerequisite: 5-300.

Elective for business administration majors and others.

A study of auditing procedures with the emphasis on how to conduct an audit in a logical and proper manner applying acceptable auditing standards. A coverage of internal controls and accounting knowledge as applied to auditing.

Lecture: two hours; laboratory: two hours.

# Department of Chemistry

Professors: Wilkinson, Hummers, Ballentine, Jumper
Associate Professors: Medbery, Leopold
Assistant Professors: Browing, Wagener, McNew, Rushing, Braun

## B.S. Chemistry Major

The course of study for students majoring in chemistry is designed to prepare them to fill positions as chemists in commercial laboratories or as control chemists in industrial plants, and to provide the basic training for them to enroll as graduate students in full standing at the leading universities.

The courses of study embody training in the four fundamental subdivisions of the science: inorganic, organic, analytical, and physical chemistry.

The department occupies Byrd Hall, completed in 1968, containing 52,000 square feet, classrooms, a lecture theater, 16 laboratories, a centrally located departmental library, and conveniently located stockrooms, preparation rooms, and balance rooms.

A chapter of Student Affiliates of the American Chemical Society is active at The Citadel.

Students majoring in the B.S. Chemistry program are required to take all of the courses offered by the department for chemistry majors and also 30-131 (Analytic Geometry and Calculus), 30-132 (Analytic Geometry and Calculus), 30-231 (Intermediate Calculus), and 30-232 (Differential Equations); 91-101 (Elementary German), 91-102 (Elementary German), 91-203 (Scientific German), and 91-204 (Scientific German); and 26-110 (General College Physics), 26-211 (General College Physics), and 26-212 (General College Physics).

## B.A. Chemistry Major

A number of students may wish to pursue higher education in medicine, dentistry, or veterinary medicine; or a career in secondary-school chemistry teaching, or other areas which use a background of chemical training. The B.A. Chemistry course of study permits many electives and great flexibility to the student to select courses which will provide him with the particular education suited to his needs. The candidate must take 35 credits in chemistry, namely 40-101, 40-102, 40-111, 40-112, 40-207, 40-208, 40-217, 40-218, 40-300, 40-301, and four chemistry electives; 15 credits in English, namely 80-101, 80-102, 80-201, 80-202, and 80-205; 12 credits in physics, namely, 26-205, 26-206, and 26-207; 30-101 and 30-102 (Fundamental Mathematics); and 70-101 and 70-102 (American History); 12 credits in either French, German, or Russian; 15 credits in approved electives; and 18 credits in elective courses.

## Premedical, Predental, and Prepharmacological Preparation

Students who plan to qualify themselves for admission to these professional schools should choose the B.A. Chemistry program. Those electing the B.A. Chemistry degree should take: 47-104 (Introduction to Zoology), 47-302 (Comparative Anatomy), and 47-401 (Embryology), and it is strongly recommended that they take, if possible: 47-308 (Genetics), 47-407 (Histology), 47-403 (Mammalian Physiology), 51-201 (General Psychology), 51-304 (Abnormal Psychology), and 30-201 and 30-202 (Introduction to Calculus).

A student must not only complete certain prescribed work for admission to a medical college but also show an aptitude for medical studies. The Medical Aptitude Test, prepared by the Association of American Medical Colleges, must be taken by all students who expect to apply for admission to a medical college.

## Requirements for Non-Science Students

Non-science students, in order to complete the requirements for a physical science in chemistry, must complete a four-course set, i.e. 40-101, 40-111, 40-102, and 40-112 or 40-101, 40-111, 40-104, and 40-114.

40-101. *General Chemistry* Three Credit Hours

Corequisite or Prerequisite: 40-111.

Required of all freshmen majoring in the sciences, engineering, or mathematics; elective to others.

Theoretical and descriptive chemistry, including the elements of modern chemical theory and discussion of some of the more common industrial processes. Slide rules are required.

Lectures and recitations: three hours a week.

40-102. *General Chemistry* Three Credit Hours

Prerequisite: 40-101.

Corequisite or Prerequisite: 40-112.

Required of all freshmen majoring in mathematics, engineering, or the sciences; elective to others.

A continuation of 40-101 with emphasis on the theoretical aspects of chemistry and discussion of some of the more common industrial processes. Slide rules are required.

Lectures and recitations: three hours a week.

40-104. *Introduction to General Chemistry* Three Credit Hours

Prerequisite: 40-101.

Corequisite or Prerequisite: 40-114.

Elective for non-science majors.

A terminal course designed for students who do not expect to take any other course in chemistry. The principles of chemistry and methods of science applied to experiences in daily life; less comprehensive than 40-102. Slide rules are required.

Lecture: three hours a week.

40-111. *General Chemistry Laboratory* One Credit Hour

Prerequisite or Corequisite: 40-101.

Required of all freshmen majoring in the sciences, engineering, or mathematics; elective to others.

This laboratory course closely parallels the lecture material in 40-101. Emphasis will be placed on quantitative experiments showing the stoichiometric relationships in chemical reactions.

Laboratory: two hours a week.

40-112. *General Chemistry Laboratory* One Credit Hour

Prerequisite: 40-111.

Corequisite or Prerequisite: 40-102.

Required of all freshmen majoring in sciences, engineering, or mathematics.

The precipitation, separation, and identification of the common cations encountered in qualitative analysis.

Laboratory: two hours a week.

40-114. *Introduction to General Chemistry Laboratory* One Credit Hour

Prerequisites: 40-101 and 40-111.

Corequisite or Prerequisite: 40-104.

Elective for non-science majors.

This laboratory course embodies experiments designed to illustrate the lecture work in 40-104; emphasis on basic laboratory techniques and on quantitative experiments showing the stoichiometric relationships in chemical reactions.

Laboratory: two hours a week each semester.

40-207 and 40-208. *Organic Chemistry* Three Credit Hours Each Semester

Prerequisites: satisfactory completion of 40-101, 40-111, 40-102, and 40-112.

Corequisite or Prerequisite: 40-217.

Required of all sophomores majoring in chemistry.

A study of the aliphatic and aromatic series of hydrocarbons and their derivatives with emphasis on reaction mechanisms and interconversions among the various classes of compounds.

Lecture: three hours a week.

This course formerly was numbered 40-303 and 40-304.

40-217. *Organic Chemistry Laboratory* One Credit Hour

Corequisite or Prerequisite: 40-207.

A course which emphasizes the development of skill in the use of basic laboratory techniques through the completion of a series of experiments involving various types of reactions such as substitution, elimination, and addition reactions with an introduction to modern instrumentation such as the IR spectrophotometer and the gas chromatograph.

Laboratory: three hours a week.

40-218. *Organic Chemistry Laboratory* One Credit Hour

Prerequisites: 40-207 and 40-217.

Corequisite or Prerequisite: 40-208.

A continuation of 40-217 with the emphasis on the synthesis, reactions, and identification of the various classes of organic compounds.

Laboratory: three hours a week.

40-300 *Quantitative Analysis* Four Credit Hours

Prerequisites: 40-102 and 40-112, 30-102 or equivalent, or permission of the department head.

Required of all juniors majoring in chemistry; elective to others.

The theory and practice of quantitative analysis, with emphasis on volumetric determinations. Instruments will be used for some procedures.

Lecture: two hours a week; laboratory: four hours a week.

This course formerly was numbered 40-202.

40-301. *Survey of Physical Chemistry* Three Credit Hours

Prerequisites: 40-102 and 40-112, 30-102 or equivalent. (40-300 is recommended, but not required.)

Required of B.A. Chemistry majors; elective to others. Not open to B. S. Chemistry majors.

An introduction to the principal topics of physical chemistry, with emphasis on those topics related to life processes.

Lecture: three hours a week.

40-302. *Instrumental Methods* Four Credit Hours

Prerequisite: 40-305.

Corequisite: 40-306.

Required of all juniors majoring in B. S. Chemistry; elective to others

The theory and practice of methods involving such instruments as colorimeters, electrophotometers, infrared, visible and ultraviolet spectrophotometers, polarographs, pH meters, titrimeters, electrodeposition apparatus, recorders, vapor phase chromatographs, gamma ray scintillation spectrometer, calorimeters, and other modern instruments including those used for detecting and measuring radioactive materials.

Lecture: two hours a week; laboratory: four hours a week.

40-305 and 40-306. *Physical Chemistry* Three Credit Hours Each Semeste

Prerequisites: 30-232 or 30-202, and 26-211 or 26-206.

Corequisite: 40-300.

Required of all juniors majoring in B. S. Chemistry; elective to others

A study of the properties of solids, liquids, and gases, and of thei relation to chemical constitution.

Lecture: three hours a week.

*40-307. *Introductory Biochemistry* Three Credit Hours

Prerequisites: 40-207, 40-208, 40-217, and 40-218 or equivalent.

An elective course consisting of the study of carbohydrates, fats and proteins and their metabolism within the biological system. Also included in this study will be a consideration of pH, enzymes, vitamins and high energy bonds.

Lecture: three hours a week.

*Offered when demand warrants.

40-308. *Chemical Literature* One Credit Hour

Required of all juniors majoring in B. S. Chemistry; elective to others.

An introduction to the effective use of chemical literature.

Lecture: one hour a week.

*40-309 *Special Topics in Analytical Chemistry* Three Credit Hours

Prerequisites: 40-300 and 26-206 or 26-211.

An elective course designed to familiarize students with the entire field of analytical chemistry with emphasis on modern methods of analysis.

Lecture: three hours a week.

*40-310. *Survey of Nuclear Science* Three Credit Hours

Prerequisites: 40-300, 30-102 or equivalent, 26-206 or equivalent, or permission of the department head.

Elective course; not open to physics majors.

A survey of the field of nuclear science particularly as applied to chemistry.

Lecture: three hours a week.

*40-312. *Chemical Bonding and Structure* Three Credit Hours

Prerequisites: 40-102, 40-112, and 30-102.

Not open to B. S. Chemistry majors; elective to others.

A one-semester course designed to introduce the student qualitatively to the modern thoughts concerning the basic theories and rules governing chemical bonding and molecular structure. A simplified discussion of bonding in the simple organic and inorganic compounds as well as some complex inorganic ions.

Lecture: three hours a week.

40-315 and 40-316. *Physical Chemistry Laboratory* One Credit Hour Each Semester

Prerequisite: 30-232.

Corequisites or Prerequisites: 40-305 and 40-306.

Required of all juniors majoring in B. S. Chemistry; elective to others.

This laboratory course is closely correlated with the lecture work in 40-305 and 40-306. It is designed to provide an introduction of the basic laboratory methods of Physical Chemistry, and to illustrate principles of thermodynamics, equilibrium, and kinetics.

Laboratory: three hours a week.

*Offered when demand warrants.

40-401 and 40-402. *Inorganic Chemistry* Three Credit Hours
Prerequisites: 40-207 and 40-306.
Required of all seniors majoring in B. S. Chemistry; elective to others.

A study of the principles and reactions of inorganic chemistry; atomic theory, valence, chemical bonds, the periodic system, acid-base theories, complex ions, radioactivity, and nuclear relationships.

Lecture: three hours a week.

40-403. *Special Topics in Organic Chemistry* Three Credit Hours
Prerequisites: 40-207, 40-208, 40-217, and 40-218.
Required of B. S. Chemistry majors; elective to others.

A study of certain topics not covered in the introductory courses including the Claisen Condensation, carbohydrates, amino acids, proteins, liquids, nucleic acids, heterocyclic compounds, dyes, polynuclear compoinds, terpenes, and steroids.

Lecture: three hours a week.

40-404. *Advanced Topics in Organic Chemistry* Three Credit Hours
Prerequisites: 40-207, 40-208, 40-217, and 40-218.
Required of B. S. Chemistry majors; elective to others.

A study of the mechanisms of organic reactions with emphasis on the critical interpretation of experimental data, structure determination by spectrophotometric methods, and special topics of current interest in organic chemistry.

Lecture: three hours a week.

40-407. *Organic Preparations* Three Credit Hours
Prerequisites: 40-207, 40-208, 40-217, and 40-218.
Required of all seniors majoring in B.S. Chemistry; elective to others.

Advanced organic syntheses and technique with emphasis on purity and yield of products.

Laboratory: six hours a week.

40-408. *Qualitative Organic Analysis* Four Credit Hours
Prerequisites: 40-207, 40-217, and 40-308.
Required of all seniors majoring in B. S. Chemistry; elective to others.

The classification, the study of type reactions, and the identification of pure organic compounds and mixtures of organic compounds.

Lecture: one hour a week; laboratory: six hours a week.

40-411. *Physical Chemistry Topics* Three Credit Hours
Prerequisites: 40-207, 40-217, and 40-306.
Required of all seniors majoring in B. S. Chemistry.

Further exploration of problems and theory of physical chemistry in areas not fully treated in 40-305 and 40-306.

Lecture: three hours a week.

40-412. *Inorganic Preparations* Two Credit Hours

Prerequisites: 40-302 and 40-305.

Required of all seniors majoring in B. S. Chemistry.

Techniques employed in several widely different inorganic syntheses.

Lecture: one hour a week; laboratory: two hours a week.

40-420. *Senior Research Project* Three Credit Hours

Required of all B. S. Chemistry majors; elective to others with permission of department head.

A laboratory research project and accompanying report on an approved topic of the student's choosing. All work will be supervised by two members of the Chemistry Department faculty.

## Geology

The geology division operates within the administration of the Chemistry Department to offer electives to upperclassmen and a somewhat modified elementary geology course, 45-303, for juniors in civil engineering.

Geological investigations and the subject matter of geology cover many fields directly related to the understanding of the physical earth and universe, the biological earth, and the economics of societies. Facilities are available with the Chemistry Department at The Citadel for student research in geochemistry at the senior level.

45-201. *Introduction to Earth Science I* Four Credit Hours

Elective to upperclassmen.

Minerals and ores; rocks and rock-forming processes; structural geology; processes which shape the surface of the earth; elementary physical oceanography.

Lecture: three hours; laboratory: two hours.

45-202. *Introduction to Earth Science II* Four Credit Hours

Prerequisite: 45-201 or 45-303 or permission of the instructor.

Elective to upperclassmen.

Interior of the earth and internal processes which deform the crust of the earth; earthquakes; ancient life and the practical use of fossils in geology; geologic history of North America; continental drift and other controversial topics.

Lecture: three hours; laboratory: two hours.

45-303. *Geology for Engineers* Three Credit Hours

Required of and limited to juniors in civil engineering.

Minerals and rocks; structural geology; surface and ground water; other processes which shape the surface of the earth and their influence on engineering practice; earthquakes; geophysical exploration; geologic maps.

Lecture: two hours a week; laboratory: two hours a week.

*45-304. *Marine Geology* Three Credit Hours

Prerequisites: 45-201 or 45-303 or permission of the instructor.

Elective to upperclassmen; offered in alternate years beginning Spring 1971.

Techniques of physical oceanography; shapes and evolution of ocean basins and floors; variations in properties of sea water; waves; tides; currents; beach erosion; estuaries; sedimentation; changes in sea level.

Lecture: three hours a week.

*45-306. *Geochemistry* Three Credit Hours

Prerequisites: 45-201 or 45-303 or permission of the instructor.

Elective to uperclassmen; offered in alternate years beginning Spring 1972.

Composition and chemical evolution of the earth and its relationship to the solar system and universe; processes and materials of the outer portion (crust) of the earth, the oceans and the atmosphere.

Lecture: three hours a week.

*Offered when demand warrants.

REFERENCE LIBRARIAN

DION

# Department of Civil Engineering

Professors: Himelright, Mellard
Associate Professors: Hutto, Clock
Assistant Professors: Middleton, Rutland, VonKolnitz, Smith, Evans

The objective of the Civil Engineering Department is to give a course which will meet the basic educational requirements of the profession of civil engineering, prepare students to pursue advanced work in graduate schools of engineering, and provide an educational background broad enough to meet the requirements of good citizenship and to enable the graduate to serve in a wide variety of other fields requiring leadership and problem-solving ability.

The four-year program begins with courses which provide a foundation of knowledge and skill in the basic arts and sciences. Limited specialization in engineering starts during the sophomore year. In the junior and senior years, the time is devoted essentially to basic professional subjects. Throughout the four years, the program emphasizes the development of habits of orderly study, investigation, sound reasoning, and problem solving, rather than the mere acquisition of factual information. It is stressed that the engineer is a professional man thoroughly grounded in engineering science and technology but also alive to the social, economic, and ecological implications of his professional activities.

The civil engineering curriculum is accredited by the Engineers' Council for Professional Development.

Each year the curriculum is augmented by off-campus educators and engineers who lecture and moderate seminars in the various engineering specialties. Students' sources of knowledge are broadened by participation in these seminars and the student chapters of the American Society of Civil Engineers, the American Road Builders' Association, and Sigma Epsilon Pi (honorary engineering society).

LeTellier Hall, the main civil engineering building, was specifically designed for the needs of civil engineering education and contains, in addition to laboratories and classrooms, the John Anderson Memorial Library (containing engineering technical works, periodicals, and reference materials), an assembly room with appropriate audiovisual aids for special lectures and society meetings, a computation room equipped with a variety of calculating machines and an IBM card-punch machine for student use, and well-equipped and well-lighted drafting rooms.

The following major laboratories are provided:

*Concrete laboratory:* A large curing room, mixing equipment, a concrete block, air entraining measuring apparatus, and scales and other minor equipment are provided in this laboratory.

*Materials testing laboratory:* Major items of equipment include a 400,000-pound universal hydraulic testing machine with a clearance of 10 feet for column testing and with a 36-inch-wide working platform, a 60,000-pound hydraulic universal testing machine with automatic stress-strain recorder, a 10,000-inch-pound torsion machine, and equipment for making tension, compression, hardness, fatigue, shearing, cold bend, sonic, and most accepted and significant tests on metals, concrete, wood, and other structural materials.

*Bituminous materials testing laboratory:* Contains equipment for making all the significant routine quality control and identification tests on asphalt cements, cutback asphalts, asphalt emulsions, and road tars. Penetration, distillation, softening point, flash point, extraction, and viscosity measuring (Engler, Saybolt-Furol, and Kinematic) equipment is provided. Equipment for the design, mixing, compaction, and testing of asphaltic concrete paving mixtures by the Marshall and other methods is included.

*Soil mechanics laboratories:* The two soils laboratories are equipped with both scale and dead-weight consolidometers, triaxial and direct shear machines, unconfined compression machines, permeameters, Atterberg limit equipment, Proctor and modified A.A.S.H.O. compaction apparatus, standard sieves, soil hydrometers, C.B.R. apparatus, and other equipment needed for tests and experiments with soils.

*Fluid mechanics laboratory:* Equipment is provided for a wide variety of experiments and tests involving the flow of water through pipes, meters, orifices, weirs, and through a Parshall flume. A 500-gpm flow is provided through a special constant head distribution system for these and other experiments. Other major items of equipment include a head loss and flow measurement fluid circuit apparatus with accompanying electrical analogue simulator, a smoke tunnel, a Reynolds number device, and a hydraulic demonstration unit permitting experiments involving many phenomena of pipe and open channel flow.

*Sanitary engineering laboratory:* Equipment is provided for water analysis determinations (primarily according to "Standard Methods") of pH, alkalinity, hardness, turbidity, and color, as well as for determinations of various specific chemical radicals and bacteriological examinations. For waste water analysis, biochemical oxygen demand and solids content may be determined. The equipment includes incubators, muffle furnace, pH meters, demineralizer, electrophotometric devices, autoclave, clean room sampling kit for determination of particulate contamination, constant temperature refrigerator, drying oven, water still, and essential minor tools and equipment.

*Other engineering equipment:* Adequate equipment is available for the courses in graphic science, surveying, photogrammetry, as well as for the junior and senior courses. This equipment includes drafting machines, planimeters, rectoplanograph, sterocomparagraphs, steroscope radial plotters, mechanical triangulation set, pocket steroscopes, height finders, and adequate steroscopic aerial photographs. Fourteen transits, nine levels, and a variety of theodolites, plane tables, compasses, sextants, level and stadia rods, chains, tapes, and associated minor equipment are used in the surveying course.

*Degree:* The degree of Bachelor of Science in Civil Engineering (B.S. in C.E.) is awarded to those who successfully complete the program of studies outlined on pages 120-121.

The nontechnical electives must be in the field of humanities. The technical and the nontechnical electives must have the approval of the Department of Civil Engineering, and the requirements of the department offering the elective must be met.

10-101 and 10-102. *Graphic Science* Four Credit Hours

Required of all civil engineering freshmen.

Use and care of drawing instruments; proper weights and types of lines for clear, clean-cut, and complete graphical representation; useful geometrical construction; freehand sketching; orthographic projection; auxiliary, revolved, and sectional views; pictorial representation with emphasis on isometric drawing; dimensioning; true lengths and shapes; intersections and developments; problems on points, lines and planes to be solved by the method of auxiliary planes in third angle projection; and specifications of fastenings, as well as typical engineering drawing of a steel truss. Problems selected with a view to emphasizing practical applications and developing the ability of the student to think in three dimensions. Development of reasonable skill in lettering.

Laboratory: four hours.

10-202. *Statics* Three Credit Hours

Prerequisites: 26-110 (General College Physics); 10-102 (Graphic Science); or concurrent with 10-102 (Graphic Science).

Required of all civil engineering sophomores.

Scalar and vector solutions of problems in statics; principles of statics; resultants, reactions, and equilibrium of forces; analysis of simple trusses, friction; centroids and centers of gravity; and moments of inertia.

Lecture: two hours; laboratory: two hours.

10-204. *Photogrammetry* One Credit Hour

Prerequisite: 10-206 or concurrent with 10-206.

Required of all civil engineering sophomores.

An elementary course in aerial photography and topographic mapping; methods of topographic projection; planning topographic flights; basic photo-interpretation; geometric properties of photographs; radial line plotting; photographic measurements.

Laboratory: two hours.

10-205 and 10-206. *Surveying* Four Credit Hours Each Semester

Prerequisites: For 10-205: 10-101 (Graphic Science). For 10-206: 10-205 and 30-131 (Analytic Geometry and Calculus).

Required of all civil engineering sophomores.

Linear measurements; leveling; compass and transit; slide rule and calculating machines; theory of errors; land surveying and boundary laws; latitudes and departures; areas and volumes; stadia; plane table; route surveys; vertical, circular, and transition curves; State plane coordinates; standard map projections; Polaris and solar observations; introduction to the use of electronic computers and the solution of problems related to surveying and other fields of civil engineering. A night-time Polaris observation is required during the 10-206 semester. Required student equipment: "log-log" duplex slide rule.

Lecture: three hours. Field two hours in addition to the required Polaris observation.

10-301. *Dynamics* Three Credit Hours

Prerequisites: 10-202 and 30-132 (Analytic Geometry and Calculus).

Required of all civil engineering juniors.

Types and principles of motion in relation to rigid bodies; rectilinear translation; curvilinear translation; rotation; work and energy; impulse and momentum.

Lecture: three hours.

10-303. *Mechanics of Materials* Four Credit Hours

Prerequisites: 10-202 and 30-132 (Analytic Geometry and Calculus).

Required of all civil engineering juniors.

Elastic properties of structural materials; internal stresses and strains; torsion; flexure; shear; riveted and welded joints; shear and moment diagrams; combined stresses; beam deflections; unsymmetrical bending; principal stress; columns; supplemented by 10-307, taken concurrently or subsequently to 10-303.

Lecture: three hours; laboratory: two hours.

10-305. *Highway Engineering* Three Credit Hours

Prerequisite: 10-206.

Required of all civil engineering juniors.

Highway economics; road costs and road user costs; economic comparison of alternates by benefit-cost ratio method; planning and financing; legislation and administration; location and geometric design; basic principles of traffic surveys; method of predicting future traffic volumes; basic highway soils engineering; drainage, grading.

Lecture: three hours.

10-306. *Highway Engineering* Three Credit Hours

Prerequisite: 10-305.

Required of all civil engineering juniors.

Alignment and earthwork drawings and computations; routine tests of highway materials, bituminous and nonbituminous; pavement and base thickness design; design and testing of asphalt paving mixtures; construction of roadway elements; construction surveys; contracts and specifications.

Lecture: two hours; laboratory: two hours.

10-307. *Materials Laboratory* One Credit Hour

Prerequisites: 30-132, 10-202, and 10-303, or concurrent with 10-303.

Required of all civil engineering juniors.

Laboratory supplement to 10-303. Introduction to the use of testing machines and equipment; strength and deformation measurements of ferous metals and concrete; properties of materials as determined by test results; compression; tensile and bending specimen tests; use of SR-4 electric strain gauge; the determination of stresses and strains in models of structural frames; use of ASTM specifications and test procedure.

Laboratory: three hours.

10-308. *Structural Analysis I* Three Credit Hours

Prerequisites: 10-303 and 30-231 (Intermediate Calculus).

Required of all civil engineering juniors.

Analysis of simple structures; reactions; shear and moment for static and moving loads on beams; stresses in members of truss structures; force systems in space including space frames; influence line diagrams; plastic theory; and analysis of steel beams.

Lecture: three hours.

10-312. *Computer Application for Civil Engineering* One Credit Hour

Prerequisite: 10-206.

Required of all civil engineering juniors.

The solution of civil engineering problems using electronic computer programs and problems oriented languages.

Lecture: one hour.

10-314. *Engineering Administration* Two Credit Hours

Prerequisite: completion of all freshman work.

Required of all civil engineering juniors.

An elementary course in engineering administration with primary attention given to the basic principles of engineering economy as applied to determination of the relative economic costs of the construction and operation of various civil engineering works. In addition, the course covers engineering ethics as applied by practicing engineers and introduces concepts of construction management and elements of contract law.

Lecture: two hours.

10-401. *Concrete Laboratory* One Credit Hour

Prerequisites: 10-307, 10-312, and 30-232 (Differential Equations).

Required of all civil engineering seniors.

Design, preparation, and testing of portland cement concrete mixes for a desired quality of concrete using both plain portland cement concrete and concretes containing the various commonly used admixtures; test specimens cured under controlled temperatures and moisture conditions; close attention given to the influence of the quality and grading of the aggregates and to other features affecting the properties of the concrete ultimately forming a structure; study and discussion of specifications governing good construction practice in handling and placing aggregates and concrete, and the control and inspection of same.

Laboratory: two hours.

10-402. *Soil Mechanics Laboratory* One Credit Hour

Prerequisites: 10-401; 10-410 to be taken concurrently.

Required of all civil engineering seniors.

Classification, control, and soil strength tests to predict suitability of soil for use in earth dams, roads, and foundations, to include specific gravity, combined mechanical analysis, Atterberg limits, permeability, compaction, unconfined compression, consolidation, triaxial, direct shear, and C.B.R. tests; field tests to consist of field density tests, soil borings, and load tests.

Laboratory: two hours.

10-403 and 10-404. *Reinforced Concrete Design* Three Credit Hours Each Semester

Prerequisites: For 10-403: 10-303, 10-308, 10-312, and 30-232. For 10-404: 10-403.

Required of all civil engineering seniors.

Theory and design of reinforced concrete structures, including the ultimate theory as applied to beams and columns. Design of footings; retaining walls; combined stress members; basic theory of prestressed concrete design; design of selected portions of concrete structures with special attention to current specifications for design and construction.

Lecture: three hours.

10-405. *Structural Analysis II* Three Credit Hours

Prerequisites: 10-303, 10-308, 10-312, and 30-232.

Required of all civil engineering seniors.

Theory of statically indeterminate structures, using method of work, three-moment theorem, slope deflection, moment distribution; analysis of steel frame buildings; model analysis using Beggs Deformeter - Matrix Methods.

Lecture: two hours; laboratory: two hours.

10-406. *Steel Design* Three Credit Hours

Prerequisite: 10-405.

Required of all civil engineering seniors.

Theory and design of steel structures, including elastic and plastic design concepts. Design of tension and compression members; beams; beam columns; welded plate girders; trusses; mill buildings - composite design.

Lecture: two hours; laboratory: two hours.

10-407. *Fluid Mechanics* Four Credit Hours

Prerequisites: 10-301, 10-312, and 30-232.

Required of all civil engineering seniors.

Fluid characteristics, properties, and definitions; fluid statics; fluid dynamics; fluid flow and measurements, and application in meters, orifices, weirs, pipes, and open channels; laboratory period for experimental demonstration of theory and for supervised computation work.

Lecture: three hours; laboratory: two hours.

10-408. *Sanitary Engineering* Four Credit Hours

Prerequisite: 10-407.

Required of all civil engineering seniors.

Relationship of water supply and sewage disposal to public health; hydrology; water consumption; quality standards; collection, treatment, and distribution of water; sewers and sewage; quantity and characteristics of sewage; methods of treatment and disposal of sewage; laboratory period for experimental demonstration of theory and for supervised computation work.

Lecture: three hours; laboratory: two hours.

10-409 and 10-410. *Soil Mechanics and Foundations* Three Credit Hours Each Semester

Prerequisites: 45-303, 10-306, 10-312, 30-232, and 10-402 to be taken concurrently with 10-410. 10-407 to be taken concurrently with or preceding 10-409.

Required of all civil engineering seniors.

Soil physics; nomenclature and field identification; grain shape and soil structure; classification systems; soil capillarity; Atterberg limits; permeability; seepage; flow nets; piping; subsurface drainage; frost action; permafrost; stresses in soils; consolidation; shear strength; stability of slopes; earth dams; bearing capacity; shallow foundations; pile foundations; earth pressure; retaining walls and open cuts; underpinning; caissons and cofferdams; subsurface exploration; soil stabilization.

Lecture: three hours.

10-420. *Senior Research Project* Two Credit Hours

Required of all civil engineering seniors as a prerequisite to graduation.

## Civil Engineering Electives

The following courses are offered on demand. They constitute part of a list of courses (including courses offered by other departments) which are approved by the head of the Department of Civil Engineering as satisfying the requirement that each civil engineering major complete a three credit hour technical elective.

10-411. *Engineering Management* Three Credit Hours

Prerequisite: completion of all freshman, sophomore, and junior courses required for civil engineering majors, or approval of department head.

Technique of engineering planning and management using the critical path method. Both computer and non-computer approaches are used.

Lecture: three hours.

10-413. *Civil Engineering Case Study* Three Credit Hours

Prerequisite: completion of all freshman, sophomore, and junior courses required for civil engineering majors, or approval of department head.

Case study of a major engineering work, utilizing both lecture and seminar techniques of presentation. Priority is given to study of local engineering works to increase the availability of persons responsible for conceiving, justifying, planning, funding, designing, and constructing the project for participation as guest lecturers and seminar leaders. Student participation is on the basis of presentation of reports on assigned features of the case study at seminars and contributions to a report on the case study.

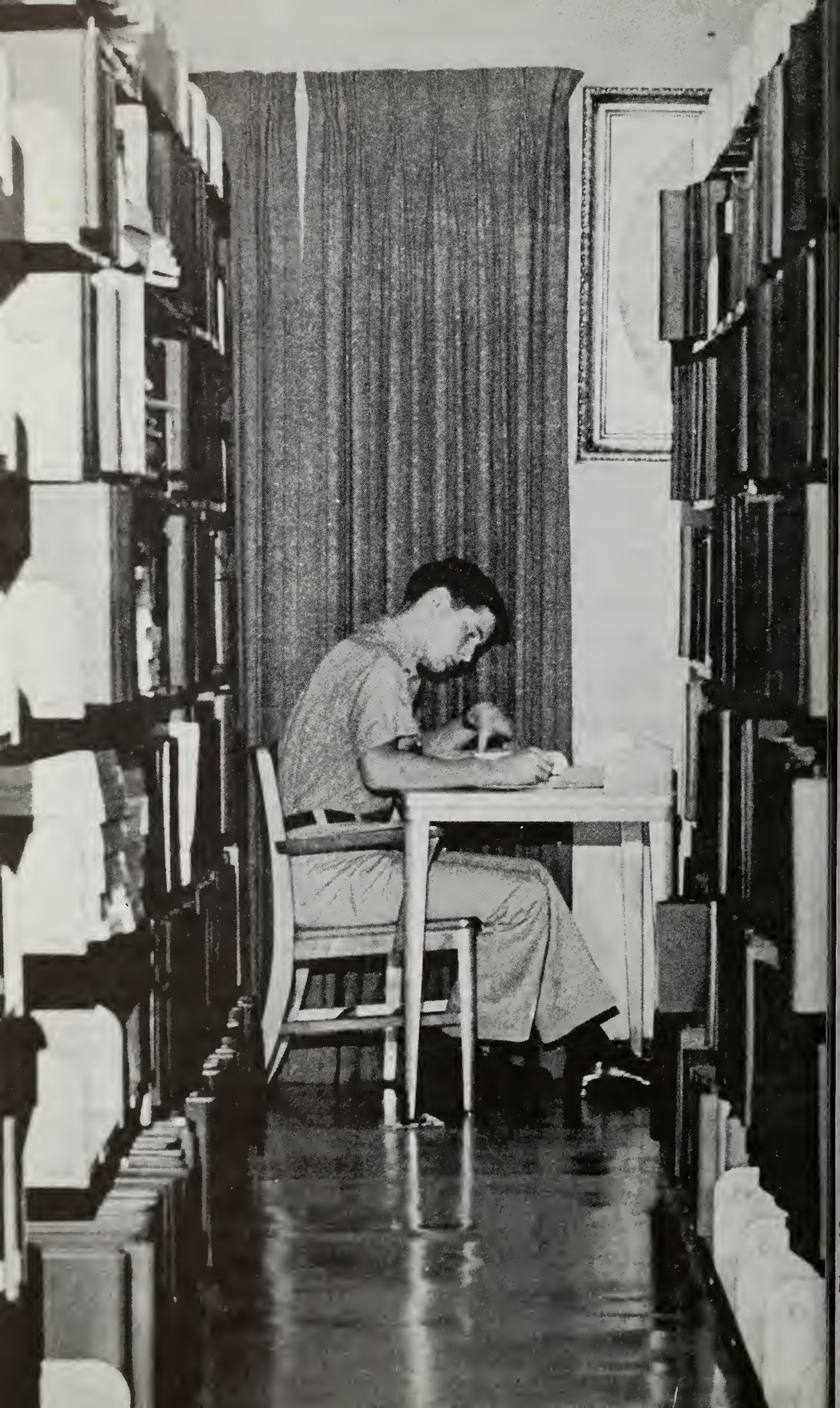
Lecture: three hours.

10-415. *Advanced Mechanics of Materials* Three Credit Hours

Prerequisite: completion of all freshman, sophomore, and junior courses required for civil engineering majors, or approval of department head.

Application of the methods of mechanics of materials and the results of plane elastic theory to the solution of some problems beyond the scope of elementary mechanics of materials. Topics covered included stress distribution in initially curved beams; thick-walled cylinders; torsion of non-circular shapes; shear center; failure theories for plastic and brittle materials. Other topics may be covered depending on the time available and the interests of the class.

Lecture: three hours.



# Department of Education

Professors: Hirshey, Bowman
Associate Professors: Magoulas, Hillard, Doran, Berryhill
Assistant Professors: Weston, Hudson, Rhett, Robinson, Clees, Shelton, Ravoira, Yarnell, Eads

The Department of Education offers majors in education and psychology, as well as courses in anthropology, art, music, philosophy, and sociology. Students who major in the department are assured a liberal arts education and have opportunities to develop teaching competencies. Education and psychology majors can go on to study medicine, dentistry, law, and numerous social and service professions.

The many disciplines offered by the department deal with the nature of man; therefore, another purpose of the department is to integrate the diverse studies dealing with human beings with a non-dissected, global view of man and his species. This also provides students with an appreciation of the interrelationships existing between different academic fields to which they are exposed. There is a high degree of flexibility within the department offerings which permits students to schedule for their needs.

Following is a summary of the three areas in which courses will be studied as prescribed and which serve as a framework within which each student will develop a program of study consistent with his individual needs as a future teacher:

## Education Curriculum

Area A: Common Learnings — First Four Semesters

| | |
|---|---|
| English: 80-101, 80-102, 80-201. 80-202, and 80-205 | 15 semester hours |
| Mathematics: 30-101 and 30-102 | 6 semester hours |
| Sciences: 47-103 and 47-104 plus 8 hours of any courses in the physical sciences | 16 semester hours |
| History: 70-101 and 70-102 plus 6 hours in social studies other than history | 12 semester hours |

Fine Arts: 54-205 and 54-206 ........................6 semester hours
Psychology: 51-201 ............................3 semester hours
Health: 59-301 ...............................3 semester hours
Physical Education: RPE 4 semesters ...............0 semester hours

Total Semester Hours: 61

ROTC ....................................8 semester hours

Area B: Professional Education
Education: 50-201, 50-301, 50-302, 50-305
50-400, 50-401, 50-406, and one elective ........27 semester hours

Area C: Major Teaching Field — Last Five Semesters

50-201. *Introduction to Education* Three Credit Hours

An orientation to teaching as a profession and to the teacher-training program. Study and discussions on school organization and teachers' roles and responsibilities; personal and professional guidance. Students will spend an average of two hours weekly observing public-school teachers.

50-301. *Philosophy of Education* Three Credit Hours

An orientation course; a survey of the history, philosophies, and theories underlying organized education; the significance of the dissemination of knowledge in a democracy.

50-302. *Educational Psychology* Three Credit Hours

This course seeks to bring the principles of educational psychology to prospective teachers in order that they may teach more effectively. A vast body of educational research and practice is brought to bear on the following areas: psychology and school problems; learning readiness and its development; learning skills, ideas, and attitudes; planning, motivation, and evaluation of learning; and emotional and mental health for learning.

50-303. *Guidance* Three Credit Hours

Philosophy, principles, and techniques to provide teachers with competencies needed for participation in guidance programs; theories and practices of guidance; mental, vocational, and aptitude testing.

50-305. *Child and Adolescent Development* Three Credit Hours

Acquisition of understanding and appreciation of the mental, physical, social, and emotional aspects of development in childhood and adolescence. Emphasis on techniques of motivation, principles of learning, the role of individual differences, the improvement of study habits, and environmental factors affecting personalities, growth, and intellectual interests.

50-310. *Teaching Reading in Elementary School* Three Credit Hours

A course designed to teach modern reading concepts and teaching strategies to elementary teachers. Basic methods, trends, recent materials, and crucial issues in reading programs are emphasized.

50-311. *Teaching Modern Mathematics in Elementary School* Three Credit Hours

A course designed for elementary school teaching methods in modern mathematics. Teaching the number system and arithmetical operations meaningfully is emphasized.

50-400. *Directed Teaching* Six Credit Hours

Prerequisites: 50-201, 50-301, 50-305, and 50-401.

A requirement for certification; observation and teaching in approved high schools under approved supervising teachers; supervision by college instructor.

The student must reserve for this teaching internship the same three consecutive hours daily, Monday through Friday. He provides his own transportation. He must make formal application for Directed Teaching not later than 6 weeks prior to the beginning of the semester.

50-401. *Methods and Materials of Secondary School Teaching* Three Credit Hours

Study of the aims, methods, and materials employed in secondary-school teaching; organization of subject matter; motivation and direction of learning; development of attitudes, appreciations, and ideals; classroom presentation of formal materials; conducting informal activities; provision for individual differences; measuring educational outcomes; reports; discussion.

50-402. *Principles and Problems of Secondary Education* Three Credit Hours

Definition and analysis of issues in American secondary education; the principles most applicable to the solution of these problems; the aims, curriculum, scope, and organization of the secondary school. Secondary education in a changing America; the impact of world conditions upon the secondary school; American secondary schools and the future.

50-405. *Methods and Materials in the Elementary School* Three Credit Hours

Study of the elementary program with emphasis upon materials, curriculum, and skills needed for teaching mathematics; social studies;

science; health, music, and physical education; and language arts other than reading. Opportunity to develop varied types of teaching plans.

50-406. *Educational Tests and Measurements* Three Credit Hours
Theories, principles, and practices of mental and educational measurements. The construction and use of the various types of objective instruments of evaluation. Elements of statistics needed in the interpretation and use of examination results.

50-407. *Audio-Visual Aids* Three Credit Hours
The aims and scope of audio-visual instruction; techniques underlying their use; projects and practice in the uses of objects, specimens, models, and pictures; the opaque projector, the motion picture, film strips, and slides; radio, television, the public address system, and the various types of recorders; selection and care of equipment; administration and supervision of the audio-visual program.

50-408. *Teaching Reading in the Secondary School* Three Credit Hours
Designed to acquaint middle-school and high-school teachers with reading practices geared to their students. The course will include a broad survey of the field of reading with attention given to some diagnostic procedures as well as the development of general reading programs for the middle school and senior high school levels. Different subject areas will be considered.

50-409. *Reading Diagnosis and Remediation* Three Credit Hours
A presentation of select diagnostic instruments and procedures for their utilization; methods for their use in planning a remedial program; instruction of children with reading difficulties; and results of teaching will be analyzed.

50-410. *Methods and Materials in Reading* Three Credit Hours
Analysis and evaluation of materials for reading instruction. Programmed, basal, linguistic, and other types of materials will be considered. Techniques of instruction will be studied and demonstrated.

50-411. *Reading Practicum* Three Credit Hours
A course in which the students engage in supervised teaching. Students will learn diagnostic teaching procedures in an effort to consistently teach pupils at their level and mode of instruction.

50-471. *The Nature of Mental Retardation* Three Credit Hours
A comprehensive study of the nature and causes of mental retardation. Specific areas include the concept of learning; causes and prevention of

mental deficiency; and educational characteristics of the mentally retarded. Emphasis will be on developing an understanding of the potential of the retarded in the learning environment. Research in the field will be reviewed.

50-472. *Methods With Exceptional Children* Three Credit Hours
Includes a study of the nature and causes of behavioral problems; theories and methods of dealing with children demonstrating behavioral and learning problems. Classroom management, teaching procedures, and lesson planning will be emphasized for the pre-adolescent and the adolescent.

50-473. *Curriculum for Exceptional Children* Three Credit Hours
This is a study of educational procedures for the mentally retarded. Modern curricula and current materials will be emphasized in relation to educational objectives and their application in the classroom.

50-474. *Diagnostic-Prescriptive Teaching* Three Credit Hours
Admission by permission of instructor.

This course is designed to acquaint the student with the rationale, purpose, model, and theory of diagnostic-prescriptive teaching. Administrative considerations and problems relevant to implementation will be included.

## Related Fields

In addition to the electives listed below, any of the Education courses may be elected by qualified students in other departments.

## Major in Psychology

The program in psychology emphasizes the contribution psychology can make to a liberal education through stimulating intellectual development, personal growth and adjustment, respect for others, and the feeling of social responsibility. The curriculum in psychology is designed to familiarize the student with current methods and theories in such fundamental areas of investigation as motivation, perception, learning, personality, and social interaction.

A student majoring in psychology may expect to develop rigorous habits of observation with reference to psychological phenomena, to become aware of the need for statistical orientation in the consideration of psychological data, and to recognize the role of multiple causation in the determination of human behavior.

The major program in psychology, which leads to the Bachelor of Arts degree, consists of 36 hours of course work in psychology, including 51-201, 51-203, 51-301, 51-302, 51-304, 51-305, 51-306, 51-310, 51-403, 51-404, 51-405, and 51-420.

51-201. *General Psychology* Three Credit Hours

Elective for sophomores, juniors, and seniors.

An introduction to the scientific study of behavior; emphasis upon experimental investigation of such fields as attention, perception, learning, intelligence, emotion, and personality.

51-203. *Research Design in Psychology* Three Credit Hours

Prerequisite: 51-201.

An introduction to descriptive and inferential statistics used in psychological experimentation. Particular emphasis is placed upon hypothesis testing by means of the t-test, and simple randomized design in the analysis of variance.

51-301. *Experimental Psychology I* Three Credit Hours

Prerequisites: 51-201 and 51-203.

Comprehensive treatment of research findings in experimental psychology in such areas as sensation and perception. Emphasizes the essential importance of rigorous hypothesis formulation and the design of experiments to test hypotheses.

51-302. *Experimental Psychology II* Three Credit Hours

Prerequisites: 51-201, 51-203, and 51-301.

A continuation of Experimental Psychology I.

51-304. *Abnormal Psychology* Three Credit Hours

Prerequisite: 51-201.

Findings based upon experimental investigation of such fields as attention, perception, and association; theories of personality; discussion of the common neuroses and psychoses.

51-305. *Social Psychology* Three Credit Hours

A study of the individual in relation to his social environment with special attention to group behavior, social motivation, and individual adjustment to group situations. May be considered a social science course.

51-306. *Theories of Personality* Three Credit Hours

A study of major contemporary theories of personality with special emphasis on the biological and psychological foundations and integrative aspects of personality.

51-307. *Mental Hygiene* Three Credit Hours

Science of preserving psychological health. The causes and prevention of mental abnormalities.

51-310. *Human Growth and Development* Three Credit Hours

Survey of total human development — mental, emotional, physical, and social — prenatal to senescent stages. Patterns of normal and deviate behavior.

51-401. *Psychology of Adolescence* Three Credit Hours

The physical, psychological, and social development of the adolescent; emphasis on personality formation and problems of social adjustment.

51-403. *Psychology of Learning and Motivation* Three Credit Hours

Prerequisite: 51-201.

A comprehensive and critical review of the experimental literature in the areas of learning and motivation, including the major learning theories and the motivational determinants of behavior.

51-404. *Applied Psychology* Three Credit Hours

Application of the principles of psychology to such topics as education, mental health, industry, crime, advertising, and personal problems. Emphasis will be upon a practical system of psychology and the well-integrated personality.

51-405. *History and Systems of Psychology* Three Credit Hours

Prerequisite: 51-201.

Historical survey of psychology, emphasizing contributions of major "schools" of psychology, theories, their place in science, and current theoretical trends.

51-420. *Senior Research Project* Three Credit Hours

Required of all psychology majors as a prerequisite for graduation.

## Philosophy

52-201. *Introduction to Philosophy* Three Credit Hours

An introduction of the fundamental problems of the nature of knowledge (epistemology), of the good (ethics), of beauty (aesthetics), and of being (metaphysics), together with a survey of ancient Greek culture emphasizing the pre-Socratic philosophers.

52-306. *Logic* Three Credit Hours

The history and principles of valid thinking; laws of reasoning; common fallacies; deductive and inductive methods.

52-307. *Ancient Philosophy* Three Credit Hours
Prerequisite: at least junior standing.
The history of Western thought from Thales to St. Augustine. The development of intellectual insights in the European tradition based upon readings in the works of classical thinkers.

52-308. *Medieval and Early Modern Philosophy* Three Credit Hours
Prerequisite: at least junior standing.
A study of the ideas most important to the contemporary world which were developed in the Medieval period. Emphasis upon St. Thomas and Meister Eckhart.

52-309. *Modern Philosophy* Three Credit Hours
Prerequisite: at least junior standing.
The history of Western thought from Boethius to the present. Selected readings and discussion of Medieval, Renaissance, and Modern Philosophers; primarily a survey of modern philosophy.

52-401. *Philosophy of Religion (Classical)* Three Credit Hours
Prerequisite: at least junior standing and three semester hours of philosophy or permission of the department head.
The meaning of religion as discussed by the classical philosophers; its relation to other fields of human value and social life; the problem of justifying religious belief.

52-403. *Ethics* Three Credit Hours
Prerequisite: at least junior standing.
An examination of traditional and recent ethical theory; reading and discussion of works by representatives of several alternative positions.

## Sociology

53-201. *Introduction to Sociology* Three Credit Hours
The scientific study of principles and comparisons in society and culture as these relate to population and communities, behavior systems, group collectivity and structure, social change, and institutions.

53-202. *Social Problems* Three Credit Hours
Analysis of deviant behavior and those factors affecting the disorganization of small groups, complex organizations, and societies.

53-303. *The Contemporary American Family* Three Credit Hours
A frank and comprehensive analysis of the problems confronting the modern American family, with case studies treating the various phases of conflict with the family.

53-304. *General Anthropology* Three Credit Hours

Man's biological and cultural origins as studied by physical anthropologists, archaeologists, and linguists.

53-401. *Criminology* Three Credit Hours

Recommended only for students who have completed 53-201.

A study of crime, its causes, conditions prevention, and treatment; a presentation of theories and hypotheses, supported by concrete facts, designed to assure the student that the theories proposed are based upon realities and exact observation.

53-402. *Cultural Anthropology* Three Credit Hours

A comparative study of culture; habitat, technology, and economy; kinship and political organization; life cycles in primitive societies.

53-403. *Urban Sociology* Three Credit Hours

Historical, demographic, and ecological materials are used to study urban society with respect to its institutions, differentation, integration, and decentralization.

53-409. *Preindustrial Societies* Three Credit Hours

Prerequisite: 53-201 or permission of department head.

A survey of preindustrial societies with emphasis upon ecology, kinship, life cycle, political organization, economics, source materials, methods of study, and other topics of interest.

53-410. *Industrial Societies* Three Credit Hours

Prerequisite: 53-409.

A survey of the landmark literature relating to the transition from agrarian to industrialized society with emphasis upon population composition, stratification, economic and political orders, and other topics of current interest.

## Fine Arts

54-205. *Music Appreciation* Three Credit Hours

A nontechnical course to enhance the student's understanding and enjoyment of music by a twofold approach: first, to gain fundamental knowledge of style, content, and form of the more outstanding works of the great composers; and, second, to study the evolution of musical art up to the present time; particular emphasis placed upon the latter.

54-206. *Art Appreciation* Three Credit Hours

The theory of abstract principles and material techniques as applied in the evaluation of works of art. The employment of such theory in an introductory study of famous art works.

54-207. *Drawing* Three Credit Hours
Prerequisite: 54-206.

An introduction to drawing in which fundamentals are taught. Objective and subjective approaches to creative compositions utilizing varied media will be stressed. Three 2-hour classes weekly.

54-208. *Color and Design* Three Credit Hours
Prerequisite: 54-206.

The fundamentals of color and design in theory and practice will be stressed. Project-oriented course in relationship to daily living. Three 2-hour classes weekly.

54-209. *Music Theory I* Three Credit Hours
Prerequisite: consent of instructor based on music literacy.

Study of basic musical materials; the structure and use of all diatonic chords; sight-singing and ear training.

54-210. *Music Theory II* Three Credit Hours
Prerequisite: 54-209.

Continuation of Music Theory I. Inversions of diatonic chords; the dominant seventh chord and its inversions; nonharmonic tones; introduction to modulation; sight-singing and ear training.

54-301. *Ancient, Medieval, and Renaissance Art* Three Credit Hours

A survey of art from the prehistoric period through Sumerian, Egyptian, Aegean, Greek, Roman, Byzantine, Romanesque, and Gothic art, culminating in the Renaissance.

54-302. *Modern Art* Three Credit Hours

A study of art styles beginning with a review of the Renaissance and continuing through Mannerism, Baroque, and Rococo art, with emphasis on the nineteenth and twentieth century schools.

## Library Science

Courses in Library Science are under the Education Department. They are intended to provide training for students wishing to qualify as teacher-librarians under the South Carolina Department of Education or to gain necessary undergraduate courses needed for admission to graduate programs of Library Science.

55-301. *Libraries and Library Service* Three Credit Hours

Designed to introduce the student to the field of Library Science and its requirements, to determine his aptitude for library work, and to define the purpose and function of libraries in general. Emphasis is upon the training and responsibilities of the librarian in the educational process. This is the basic introductory library-administration course which acquaints the student with those facets of library administration which all libraries have in common.

55-302. *Administration of the School Library* Three Credit Hours

The administration, organization, planning, and equipment of school libraries and teaching materials with emphasis upon budgeting, ordering, maintenance of the book collection, and circulation procedures within a school library.

55-303. *Reference Sources* Three Credit Hours

An introduction to the 115 basic reference sources most used in college, university, public, and school libraries. This includes dictionaries, encyclopedias, indexes, yearbooks, and government documents which are studied and evaluated for their use in each type of library. Emphasis is on the theory and practical experience in reference work.

55-304. *Cataloging and Classification* Three Credit Hours

Basic principles of cataloging and classification combined with practical experience in processing the various types of books and materials. Problems peculiar to teacher-librarian will be emphasized.

55-305. *Children's Literature* Three Credit Hours

History of children's books; their selection and evaluation, including modern books emphasizing winners of the Coldecott and Newbury Awards. Includes wide reading of all classes of children's literature and details which make children's books worthwhile. The course will be supplemented by discussion, reports, and special projects.

# Department of Electrical Engineering

Professor: Herring
Associate Professors: Cory, Johnson, Scoggin

In 1941 the Board of Visitors authorized the establishment of a Department of Electrical Engineering at The Citadel. The department was founded to meet the needs of many students who are attracted to the type of education which The Citadel offers, but who were formerly compelled to go elsewhere to obtain training in the field of their special interest.

The first graduating class of eight men received degrees in September 1948. Since then, the facilities and curriculum have been steadily improved. A chapter of Student Members of the Institute of Electrical and Electronics Engineers is active at The Citadel.

It is the purpose of the department to prepare men for professional work or for graduate study in the field of electrical engineering and to give them training in as many of the elements of a broad education as can be included in a program of professional study leading to the degree of Bachelor of Science in Electrical Engineering.

For a tabulation of the course requirements for electrical engineering majors, see "Courses of Study," pages 124-125. With the approval of the department head, up to six credit hours of professional electives may be elected from courses numbered above 300 in the department of chemistry, civil engineering, mathematics, or physics.

20-101. *Engineering Orientation* One Credit Hour

Required of electrical engineering freshmen.

A course describing the responsibilities and problems facing professional engineers. Guidance and counseling in effective study methods.

Lecture: one hour.

20-103. *Engineering Graphics* Two Credit Hours

Required of electrical engineering freshmen.

Communication of engineering information by graphical methods. Visualization of three-dimensional forms; free-hand sketching; graphical representation of experimental data. Use of drafting aids to produce electrical drawings. Development of reasonable skills in lettering.

Laboratory: four hours.

20-201 and 20-202. *Introduction to Electrical Engineering* Three Credit Hours Each Semester

Prerequisites for 20-201, to be preceded or accompanied by 26-110 and 30-131.

Prerequisites for 20-202, to be preceded or accompanied by 26-211 and 30-132.

Required of electrical engineering sophomores.

Basic electrical elements and sources; Ohm's and Kirchhoff's Laws; techniques of DC circuit analysis; sinusoidal analysis and phasors; power and three phase circuits; transient response of simple circuits.

Lecture: three hours, two semesters

20-301 and 20-302. *Electrical Laboratory* One Credit Hour Each Semester

Required of electrical engineering juniors.

A two-semester sequence of laboratory work which is coordinated with the lecture courses in the junior year.

Laboratory: two hours.

20-305. *Introduction to Electronics* Three Credit Hours

Prerequisites: 20-202, 26-212, and 30-232.

Required of electrical engineering juniors.

Electron ballistics and basic semiconductor physics; characteristics of vacuum and solid-state devices; analysis of active networks.

Lecture: three hours.

20-308. *Elements of Electrical Engineering* Three Credit Hours

Prerequisites: 26-211 and 30-231.

Required of civil engineering juniors.

Electric and magnetic circuits and fields; electrical machinery; measurements, instrumentation, and control; basic electronics.

20-309. *Linear Circuit Analysis* Three Credit Hours

Prerequisites: 20-202, 26-212, and 30-232.

Required of electrical engineering juniors.

Solution of network equations; network theorems; Fourier series; transient and unbalanced polyphase circuits.

Lecture: three hours.

20-310. *Electromechanical Energy Conversion* Five Credit Hours

Prerequisite: 20-309.

Required of electrical engineering juniors.

A study of the principles and characteristics of static and dynamic energy conversion devices.

Lecture: five hours.

20-401. *Electronic Circuits* Three Credit Hours

Prerequisites: 20-305 and 20-309.

Theory and design of electronic circuits; narrow-band, wideband, and DC amplifiers; oscillators, modulators, and detectors; pulse circuits.

Lecture: three hours.

20-402. *Electronic Systems* Three Credit Hours

Prerequisite: 20-401.

AM, FM, and pulse communication systems; instrumentation.

Lecture: three hours.

20-405. *Electrical Measurements* Three Credit Hours

Prerequisite: 20-309.

Modern methods of measuring resistance, inductance, capacitance, current, electromotive force, frequency, and magnetic quantities.

Lecture: three hours.

20-407. *Logical Design of Digital Computers* Three Credit Hours

Boolean algebra; synthesis of switching circuits; basic logic circuits; digital computer structure; instruction codes; input-output and memory devices.

Lecture: three hours.

20-408. *Electric Power Systems* Three Credit Hours

A study of electric power generation, transmission, and distribution circuits. System economics. Study of load-flow, faults, and system stability.

Lecture: three hours.

20-409. *Seminar* One Credit Hour

Required of electrical engineering seniors.

A study of current literature in electrical engineering and related fields. A library research paper is required as a part of the course work.

20-411 and 20-412. *Electrical Laboratory* One Credit Hour
Each Semester

Required of electrical engineering seniors.

A two-semester sequence of laboratory work which is coordinated with the lecture courses in the senior year.

Laboratory: two hours.

20-413 and 20-414. *Circuit Networks* Three Credit Hours Each Semester

Prerequisites: 20-309 and 30-232.

Analysis and synthesis of electrical circuit networks using matrix and transform techniques; filter design; transient response of linear circuits.

Lecture: three hours, two semesters.

20-415 and 20-416. *Automatic Control Systems* Three Credit Hours Each Semester

Prerequisites: 20-310 and 30-232.

Electrical, mechanical, and hydraulic control system components; feedback theory; analysis and design of automatic control systems.

Lecture: three hours, two semesters.

20-417 and 20-418. *Electromagnetic Theory* Three Credit Hours Each Semester

Prerequisites: 20-309 and 30-232.

Required of electrical engineering seniors.

Vector algebra; electrostatic and magnetostatic fields; Maxwell's equations; boundary conditions; wave propagation and radiation.

Lecture: three hours, two semesters.

20-419. *System Simulation* Three Credit Hours

Prerequisite: 30-232.

A study of simulation methods for physical systems using analog and digital computers.

Lecture: three hours.

20-420. *Senior Research Project* Three Credit Hours

Prerequisite: approval of department head.

A research project and formal report. Recommended for students planning graduate work. Approval for enrollment based on capability of applicant and the acceptance of a written proposal.

# Department of English

Professors: McDowell, Doyle, McCoy, H. C. Carpenter

Associate Professors: Alexander, Brennan, J. B. Carpenter, Holbein, Morris, Riley, Weile

Assistant Professors: Hansen, Harvey, Mathis, MacLeod, O'Neil, Peurifoy, Redd, Rembert

Courses in English composition and literature are required of all freshmen and sophomores, regardless of their major fields of study.

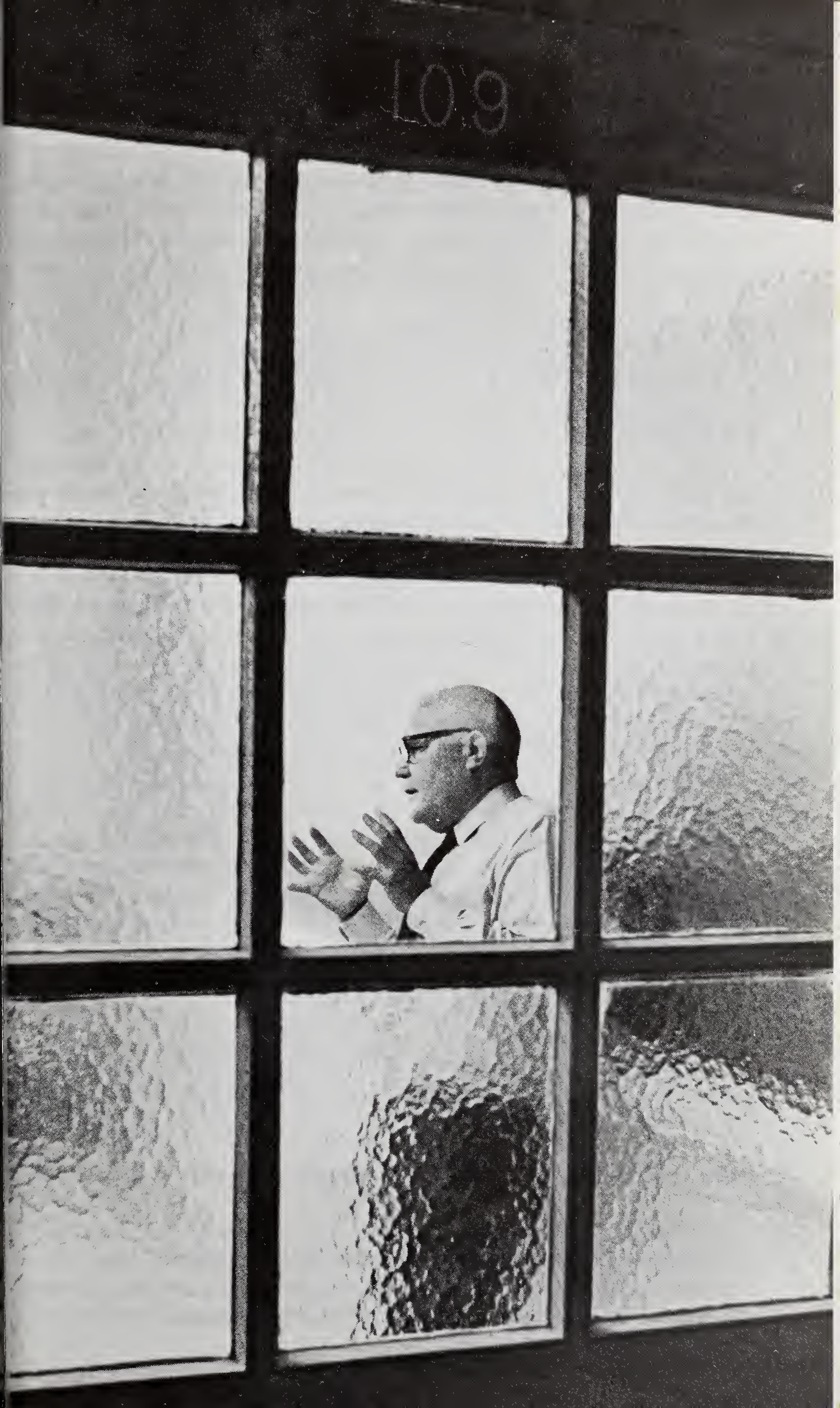
Advanced standing with credits is given entering cadets who complete the College Entrance Board Advanced Placement Test in English with a grade of three or better.

The English major is designed for the student seeking a broad education suitable for a career in law, business, the armed forces, teaching, dentistry, medicine, or theology. In addition to a strong background in literature, the department offers a generous selection of elective courses that allow either a truly broad liberal arts background or an opportunity to take a number of courses within a secondary field.

The program within the English Department provides both depth and flexibility. Course offerings range from Anglo-Saxon literature to twentieth century American literature. The creative student may enjoy courses in writing poetry, the short story, and in journalism. A system of tutorials and seminars allows both small classes and independent study.

By being allowed to take as many as eight courses outside the department during his junior and senior years, the student has ample latitude to follow other interests. During his freshman and sophomore years, he may take a number of courses insuring a background in a modern language, the sciences, mathematics, and the social sciences.

In his freshman year the English major must elect one of the natural sciences: biology, chemistry, or physics. Also, he must elect a modern language and complete two years of study. The entering freshman with two or more units in a modern language may complete the lan-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guage requirement in one year by starting at the 200 level. During the sophomore year the English major is required to take 70-201 and 70-202 (A Survey of European Civilization Since 1500) and two approved courses. He may elect such courses as 51-201 (General Psychology), 53-201 (Introduction to Sociology), 54-206 (Art Appreciation), 54-205 (Music Appreciation), 52-201 (Introduction to Philosophy), or 80-205 (Introduction to Public Speaking).

In English the student is required to take 80-213 and 80-214 (Survey of English Literature), and he must select two of the following: 80-210 (General Semantics), 80-211 (Mythology), or 80-212 (The Bible as Literature). During the junior and senior years he must take a minimum of three courses from Group A, Literature Before 1800, of which one course must be 80-317 or 80-318 (Shakespeare) and a second course must be 80-301 (Chaucer) or 80-319 (Milton). He must take two courses in Group B, Literature After 1800, of which one course must be 80-327 or 80-328 (American Literature to 1900). In Group C, Criticism, Language, and Writing, he must take two courses but may use only one criticism course (80-407 or 80-408), one journalism course (80-417 or 80-418), and one course in the Backgrounds of English Literature (80-405 or 80-406) to fulfill the requirement. The student may pursue his special interests by selecting five more courses from the three groups.

Unless otherwise indicated in the course description, all English courses are open as electives to all students subject to approval by the head of the department. Juniors and seniors who qualify and are not English majors may take courses under the pass-fail grading system.

For a tabulation of the requirements for the English major, see pages 126-127.

80-101 and 80-102. *Composition and Literature* Three Credit Hours Each Semester

Required of all freshmen.

The development of the basic skills of writing and reading and of literary evaluations through the study of four types of literature. 80-101 is a prerequisite for 80-102.

80-201 and 80-202. *Major British Writers* Three Credit Hours Each Semester

Prerequisites: 80-101 and 80-102.

Required of all sophomores other than English majors.

Study in depth of major writers in British literature from the medieval period to the present. 80-201: Beowulf, Chaucer, Shakespeare, Milton, Pope, and Swift. 80-202: Wordsworth, Keats, Tennyson, Browning, Hardy, Yeats, and Eliot. Several themes assigned on the literature studied.

80-205. *Introduction to Public Speaking* Three Credit Hours

Prerequisite: 80-101.

Open to freshmen, sophomores, juniors, and seniors.

The general principles of speech composition and speech presentation; practice in expository speaking.

80-206. *Persuasive Speaking* Three Credit Hours

Prerequisite: 80-205.

Open to sophomores, juniors, and seniors.

Logic, rhetoric, and psychology of securing desired reactions from friendly, neutral, and hostile audiences; sources of speech material and planning the speech; and improvement of volume, diction, rate, and platform manners in extemporaneous and manuscript delivery of classroom speeches.

80-210. *General Semantics* Three Credit Hours

Open to sophomores, juniors, and seniors.

A psychological approach to the study of language as an abstracting process employing a system of verbal symbols for informative, directive, and affective purposes.

80-211. *Mythology* Three Credit Hours

Open to sophomores, juniors, and seniors.

A study of mythology with special emphasis on Greco-Roman and Northern European myths. A discussion of the leading theories concerning the origins, development, and significance of myths together with the allusive and allegorical use of myth in later literature and art.

80-212. *The Bible as Literature* Three Credit Hours

Open to sophomores, juniors, and seniors.

A study of selected portions of the Old and the New Testaments as literary masterpieces and cultural monuments, with some attention to the major systems of interpretation.

80-213 and 80-214. *Survey of English Literature* Three Credit Hours Each Semester

Prerequisites: satisfactory completion of 80-101 and 80-102 or their equivalent. Note: students who have received course credit for 80-201 and 80-202 cannot receive additional credit for 80-213 and 80-214.

Required of all English majors.

First semester: a study of English literature from its beginnings to the end of the eighteenth century. Second semester: a study of English literature from the end of the eighteenth century to the present. Both courses will include some consideration of historical backgrounds and literary movements.

## GROUP A
### Literature Before 1800

English majors must complete a minimum of nine hours in this area: three hours in Shakespeare (80-317 or 80-318); three hours in Chaucer (80-301) or in Milton (80-319); and three hours in one other course of this group.

80-300. *Literature of Medieval England, exclusive of Chaucer* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A survey of the most important literature composed in England from the seventh to the fifteenth centuries, mostly in translation.

80-301. *Chaucer* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Required of all English majors as alternate to Milton. Open as an elective to other juniors and seniors.

An introduction to Chaucer's language, narrative skill, and mastery of poetic forms through reading in the original "The General Prologue," selected tales from *The Canterbury Tales, Troilus and Criseyde,* and some of the shorter poems.

This course formerly was numbered 80-302.

80-317 and 80-318. *Shakespeare* Three Credit Hours Each Semester

Prerequisites: 80-213 and 80-214, or approval of department head.

One semester required of all English majors. Open as an elective to other juniors and seniors.

A study of representative plays—comedies, histories, and tragedies—to give the student insight into the greatness of Shakespeare as dramatist, poet, and illuminator of life.

This course formerly was numbered 80-401 and 80-402.

80-319. *Milton* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Required of all English majors as alternate to Chaucer. Open as an elective to other juniors and seniors.

A study of *Paradise Lost* entire, of *Samson Agonistes,* and of representative prose works, with special attention to the philosophical content.

This course formerly was numbered 80-400.

80-320. *Non-dramatic Literature of Sixteenth Century England* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A study of the principal writers of the period (More, Wyatt and Surrey, Sidney, Elyot, and Spenser, among others), with particular emphasis on the prominent aspects of the Renaissance spirit.

80-321. *Seventeenth Century Poetry and Prose, exclusive of Milton* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A study of representative prose prior to the Restoration, of representative poetry of Ben Jonson and his "sons," and of John Donne and the metaphysical poets.

This course formerly was numbered 80-316.

80-322. *Survey of English Drama to 1800* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A detailed study of representative plays (less Shakespeare's) from the medieval beginnings of English drama to the end of the Enlightenment.

This course formerly was numbered 80-307.

80-323. *Neoclassicism, 1660-1744* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

Dryden, Addison, Swift, and Pope, with some attention to the lesser writers of the period.

This course formerly was numbered 80-303.

80-324. *The Age of Johnson, 1744-1798* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A study of the decline of Neoclassicism, the rise of prose, and the movement toward Romanticism. Major figures are Gray, Boswell, Johnson, Burns, and Blake.

## GROUP B
### Literature After 1800

English majors must complete a minimum of six hours in this area: three hours in American Literature (80-327 or 80-328) and three hours in one other course of this group.

80-325. *The Romantic Movement* Three Credit Hours

Prerequisites: 80-312 and 80-214, or approval of department head.

Open to juniors and seniors.

A study of the chief features which culminated in the Romantic writings of the early nineteenth century, with special emphasis on the five major poets: Wordsworth, Coleridge, Byron, Shelley, and Keats.

This course formerly was numbered 80-304.

80-326. *Victorian Poetry and Prose.* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A study of the period from 1830 to 1900, showing the effects of the Industrial and Scientific Revolutions on traditional attitudes toward art and life through the works of the major writers of the period, with emphasis upon the poetry of Tennyson, Browning, and Swinburne and upon the prose of Carlyle, Arnold, Huxley, and Pater.

This course formerly was numbered 80-305.

80-327 and 80-328. *American Literature to 1900* Three Credit Hours Each Semester

Prerequisites: 80-213 and 80-214, or approval of department head.

One semester required of all English majors. Open as an elective to other juniors and seniors.

A study of some of the best writing done by Americans from the time of the first settlements down to the present: the first semester covering the literature of the colonial and revolutionary periods and such writers as Irving, Bryant, Hawthorne, Poe, Melville, Emerson, and Thoreau; the second semester covering such writers as Lincoln, Whitman, Emily Dickinson, Mark Twain, Howells, James, and Henry Adams.

This course formerly was numbered 80-403 and 80-404.

80-329. *The Development of the English Novel to 1900* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head. Open to juniors and seniors.

Lectures on narrative forms which preceded the novel and on lives and works of major eighteenth and nineteenth century novelists; reading and discussion of selected novels.

This course formerly was numbered 80-309.

80-330. *The Nineteenth Century American Novel* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head. Open to juniors and seniors.

A study of the novels of Hawthorne, Mark Twain, James, Howells, Melville, and other major American novelists of the nineteenth century. Assigned reading, class discussion, lecture, and written reports on collateral reading.

80-331. *Survey of English and American Drama* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head. Open to juniors and seniors.

A study of representative plays to show the development of late nineteenth century English and twentieth century English and American drama under the influence of Ibsen, Strindberg, Pirandello, Maeterlinck, and other continental playwrights. Major figures include Shaw, O'Neill, Miller, and Williams.

This course formerly was numbered 80-308.

80-332. *Modern Novel in English* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head. Open to juniors and seniors.

A course in the reading and critical analysis of selected English and American novels by James, Conrad, Schreiner, Lawrence, Anderson, Lewis, Cather, Hemingway, and Faulkner. A term paper on a novel other than those studied in class.

This course formerly was numbered 80-310.

80-333. *Southern Literature to 1900* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head. Open to juniors and seniors.

A survey of the literary achievement of Southern writers from 1710 to 1900. Special emphasis on William Gilmore Simms, Paul Hamilton Hayne, Henry Timrod, Sidney Lanier, and the frontier humorists of the old Southwest: Johnson Jones Hooper, Augustus Baldwin Longstreet, Joseph Glover Baldwin, and George Washington Harris.

80-334. *Major Writers of the Southern Renaissance* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A study of the most important Southern authors of the twentieth century, from Ellen Glasgow to the present day, with emphasis on significant regional topics such as the Fugitive and Agrarian Movements, the Development of the Southern Tradition, and the Southern Gothic School.

80-335. *Contemporary British Literature* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

A study of selected works by major British novelists and poets whose writings are representative of the ideas, literary techniques, and cultural patterns of England and Ireland from World War I to the present. Poets studied: Hardy, Hopkins, Housman, Graves, and Spender.

This course formerly was numbered 80-312.

80-336. *Modern British and American Poetry* Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

Study of the poetry of Yeats, Robinson, Frost, Eliot, and Auden from as extensive a reading of their work as time permits; lectures planned to provide a foundation for future reading in these five and other poets; term essay and class report on a twentieth century poet other than the above five, each member of the class studying a different poet.

This course formerly was numbered 80-306.

## GROUP C
### Criticism, Language, and Writing

English majors must complete six hours in this area.

80-405 and 80-406. *Backgrounds of English Literature* Three Credit Hours Each Semester

Prerequisites: 80-201 and 80-202 or 80-213 and 80-214.

Open to juniors and seniors.

An examination of the great literary traditions—epic, lyric, romantic, dramatic, narrative, and philosophical—in the literature of both the Orient and the Occident from the beginnings to the fifteenth century with emphasis on the contributions to English literature; the second semester begins with the fifteenth century and continues through the present.

80-407 and 80-408. *Principles of Literary Criticism in English* — Three Credit Hours Each Semester

Open to senior English majors and to any student who has completed two full-year courses in English above the sophomore level, or approval of department head.

A study of the classical tradition in criticism, the Renaissance restatement, and neoclassic developments; and of the development of modern criticism.

80-409. *Writing Poetry* — Three Credit Hours

Open to juniors and seniors.

Analysis of and practice in writing poetry; varied in accordance with the experience and expectation of the students registered.

80-410. *Writing the Short Story* — Three Credit Hours

Open to juniors and seniors.

Analysis of short stories, followed by practice in writing them.

80-413. *Advanced Composition* — Three Credit Hours

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to selected juniors and seniors.

The development of effective styles of writing through analysis and imitation of masters of English prose.

This course formerly was numbered 80-311.

80-415 and 80-416. *The English Language* — Three Credit Hours Each Semester

Prerequisites: 80-213 and 80-214, or approval of department head.

Open to juniors and seniors.

A survey of the history of the English language, beginning with the Indo-European backgrounds, tracing the development of Old, Middle, and Modern English through major phonological, morphological, and syntactical changes, with some attention to dialectal variations, and concluding with emphasis on standard and current grammar usage.

This course formerly was numbered 80-203 and 80-204.

80-417 and 80-418. *Journalism* Three Credit Hours Each Semester

Prerequisites: 80-201 and 80-202 or 80-213 and 80-214 with C average or higher, or approval of department head.

Open to sophomores with approval of department head, and to juniors and seniors.

First semester: newswriting and copy editing; second semester: newspaper and magazine design, layout, and production. Both semesters include numerous news and feature article writing exercises, workshops, and other aspects of journalism. Each semester is independent of the other and can be taken in any order.

This course formerly was numbered 80-313 and 80-314.

80-421. *Senior Tutorial* Three Credit Hours

Prerequisite: approval of department head.

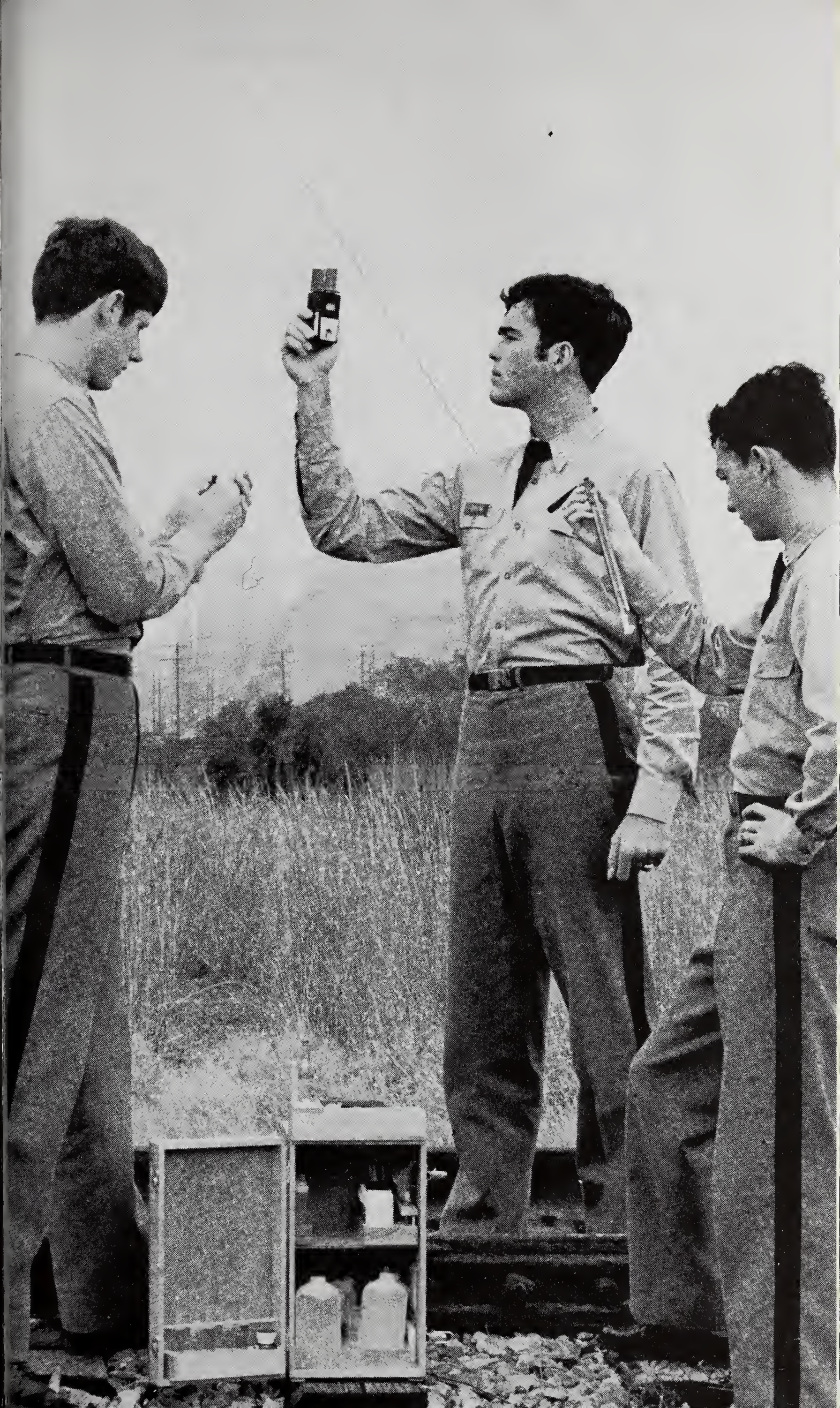
Open to senior English majors.

A tutorial course individually designed to meet the needs or special interests of one or a few students. Assignments, tutorial sessions, tests and papers will be assigned by the professor in consultation with individual students.

80-423 and 80-424. *Senior Seminar* Three Credit Hours Each Semester

Open to senior English majors.

A seminar on an individual author, topic, or problem, as suggested by members of the faculty or by groups of English majors and subject to the approval of the department head in consultation with the instructor.



THE WORLD

# Department of History

Professors: Anger, Phillips, Lee, Martin, Addington
Associate Professors: Goodhart, Fortunato, Coussons, Nichols
Assistant Professors: Harris, Cole, Brittain, Fraser, Moore

The Department of History endeavors to give to the student an acquaintance with and an appreciation of our heritage; to enable him to see causes and effects, contrasts and comparisons as shown in the development of civilization; to give him an accurate knowledge of the history of his own country and to familiarize him with its institutions and the democratic ideals which have influenced American life; to acquaint the student who elects this subject with the standard works in its various fields and to prepare him to pursue graduate and professional studies.

A graduate with a major in history will, with his 24 hours of selected electives, be well-qualified for the responsibilities of citizenship and also will have the broad background necessary for a successful career in business, law, the armed services, the church, and certain fields of science.

Students electing history as a major are required to take the following courses: 70-101 and 70-102 (A Survey of American History), 70-201 and 70-202 (A Survey of European Civilization Since 1500), 70-301 and 70-302 (History of England), and a total of 21 semester hours selected from the junior and senior courses offered by the department. They are also required to take two years of a modern language, 5-201 (Economic Origins and Principles) and 5-202 (Economic Principles and Problems), 60-201 (American National Government), 60-202 (State and Local Government), 71-309 (Elementary Geography), and 60-401, 60-402 (Constitutional Law), 60-405, 60-406 (International Politics), or 60-407, 60-408 (Political Theory). For further details see the tabulation of the curriculum for a history major on pages 128-129.

Courses marked with an asterisk (*) are usually offered in alternate years or on demand.

70-101 and 70-102. *A Survey of American History* Three Credit Hours Each Semester

Required of all cadets in their freshman and/or sophomore year.

Survey of American history from the period of discovery to the present; a brief treatment of the colonial period, followed by a more detailed study of such subjects as the causes of the Revolution, the framing of the Constitution, the development of political parties, the sectional conflict, economic progress and problems, and foreign relations; special emphasis placed on understanding the nature of American democracy and the role of the United States in world affairs from 1789 to the present.

70-201 and 70-202. *A Survey of European Civilization Since 1500* Three Credit Hours Each Semester

Required of sophomores majoring in history, political science, English, and modern languages. The historical background of contemporary civilization, emphasis on movements and developments of enduring significance; the evolution of national states; the growth of representative and democratic institutions of government; the development of modern capitalism; the origins of current international conflicts; and the progress of science, art, and literature.

70-203 and 70-204. *History of Western Civilization* Three Credit Hours Each Semester

An elective for those majors who are not required to take 70-201 and 70-202.

A survey of the development of Western institutions, ideas, and cultures from the beginnings of civilization to the present day. Emphasis is given to economic, social, and cultural forces as well as to purely political and military ones. First semester to 1660, second from 1660 to the present. Each semester may be taken independently.

A student with credit for 70-203 and 70-204 (History of Western Civilization) cannot receive credit for 70-201 and 70-202 (A Survey of European Civilization Since 1500) or 70-407 and 70-408 (History of the Ancient World and the Middle Ages).

70-205. *History of Naval Warfare* Three Credit Hours

A survey of the history of naval warfare since ancient times, with emphasis on the historical development of naval strategy, tactics, organization, and influence on world affairs. Meets NROTC sophomore naval history requirement.

70-301 and 70-302. *History of England* Three Credit Hours Each Semester

Required of all history majors.

A survey of English history from earliest times to the present. Special attention is given the formation of the English people, the continuity of their social and political experience, and the English legacy to Americans. The institutional development of parliament, monarchy, legal system, and local government is constantly viewed against the changing background of society and economic activity.

Juniors majoring in history are required to take 70-303 and 70-304; 70-305 and 70-306; or 70-313 and 70-314.

70-303 and 70-304. *The United States Since 1900* Three Credit Hours Each Semester

American social, cultural, economic, and political development in the twentieth century; emphasis on the increasing importance of the United States in world affairs and significant political and economic changes.

70-305 and 70-306. *Europe in the Twentieth Century* Three Credit Hours Each Semester

Prerequisite: 70-202 or permission of the department head.

A study of the origins and impact of World War I on the major European states; their political, social, and economical development during the twenties and thirties; the origins and course of World War II and its aftermath, the Cold War.

*70-307. *History of Europe, 1815-1900* Three Credit Hours

A survey of the conflict in Europe of reaction and reform; the Industrial Revolution with its economic, social, and political effects; the efforts toward nationalism; renewed interest in imperialism and other factors in international rivalries.

*70-308. *Renaissance and Reformation* Three Credit Hours

The Renaissance as a European-wide movement, emanating from the Italian Peninsula; the religious, political, and social upheavals of the period 1500-1648.

*70-309. *The American Civil War and Reconstruction* Three Credit Hours

Emphasis on the political, economic, and social developments of the period, with some attention to the military aspects of the war.

*70-310. *The Era of the French Revolution and Napoleon* Three Credit Hours

A survey of the Old Regime and the causes of the Revolution, followed by an examination of the principal events of the period, stressing the innovations of the Revolutionary governments, the causes of Napoleon's rise to power, his achievements in France and in Europe, the reasons for his eventual downfall.

*70-311. *The Old South* Three Credit Hours

The political, social, and economic characteristics of the South before 1860 with emphasis on the role of this area in the national scene.

*70-312. *The New South* Three Credit Hours

The political, economic, and social development of the South since 1877; emphasis on contemporary regional problems and their impact on American life.

70-313 and 70-314. *Social and Intellectual History of the United States* Three Credit Hours Each Semester

The origin and development of, as well as the interaction between, the customs and arts; the religious, political, and economic ideas that have shaped the American mind and character.

70-315 and 70-316. *History of Modern Warfare* Three Credit Hours Each Semester

70-315 is a prerequisite for 70-316.

A survey of the development of modern warfare, emphasizing the impact of social, economic, political, and technological forces upon military theory and practice.

*70-317. *Economic History of the United States* Three Credit Hours

A survey of American development from the colonial period to the present with respect to agriculture, business, industry, labor, and related governmental policies.

*70-318. *Economic History of Modern Europe* Three Credit Hours

A survey of the development of the European economy from the origins of the first Industrial Revolution to the Common Market; particular emphasis upon those areas where increasing industrialization forced governmental action, changed social structure, and created new systems of thought.

Seniors majoring in history are required to take 70-401 and 70-402; 70-403 and 70-404; or 70-409 and 70-410, and 70-405 and 70-406 or 70-407 and 70-408.

70-401 and 70-402. *History of American Diplomacy* Three Credit Hours Each Semester

The heritage, fundamental principles, and progressive development of American foreign policy from colonial times to the present with emphasis on the effect of domestic politics; the role of the United States as leader of the Western world.

70-403 and 70-404. *Latin American History* Three Credit Hours Each Semester

Survey of the economic, cultural, and political development of Latin America; study of the nations as a unit, with special attention to the individuality of each; concentration by each student in his collateral reading on some one country.

70-405 and 70-406. *History of Colonial America* Three Credit Hours Each Semester

A more detailed treatment of the foundations of American civilization than in 70-101; the motives of colonization; the evolution of self-government; the extension of the frontier; economic, social, and religious life; the causes of the Revolution; and the problems of the Confederation.

70-407 and 70-408. *History of the Ancient World and the Middle Ages* Three Credit Hours Each Semester

The Ancient World in the first semester, the Middle Ages in the second; a survey of the history of the Greeks, the Romans, and the people of the Middle Ages, their wars and political institutions, their economic and social life, and their cultural and intellectual achievements.

70-409. *History of the Far East in Modern Times* Three Credit Hours

A survey of the Far East from the first contacts with the West to the present.

70-410. *History of Modern Russia* Three Credit Hours

A survey of Russian society, politics, and culture from the early modern era to the present. Intensive treatment beginning with the Great Emancipation through the twentieth-century revolutions and the consolidation of Soviet rule.

*70-411. *South Carolina History* Three Credit Hours

A survey of the political, economic, social, and intellectual developments of South Carolina from its discovery to the present, with emphasis on the relation of the state to the South and to the nation.

70-412. *Studies in Military Affairs Since the Eighteenth Century* Three Credit Hours

Prerequisite: 70-316, History of Modern Warfare or the equivalent.

Studies in depth of selected military history topics with emphasis on student reading, research, and group discussion.

70-420. *Senior Research Project* Three Credit Hours
Prerequisite: approval of department head and supervising instructor.

## Geography

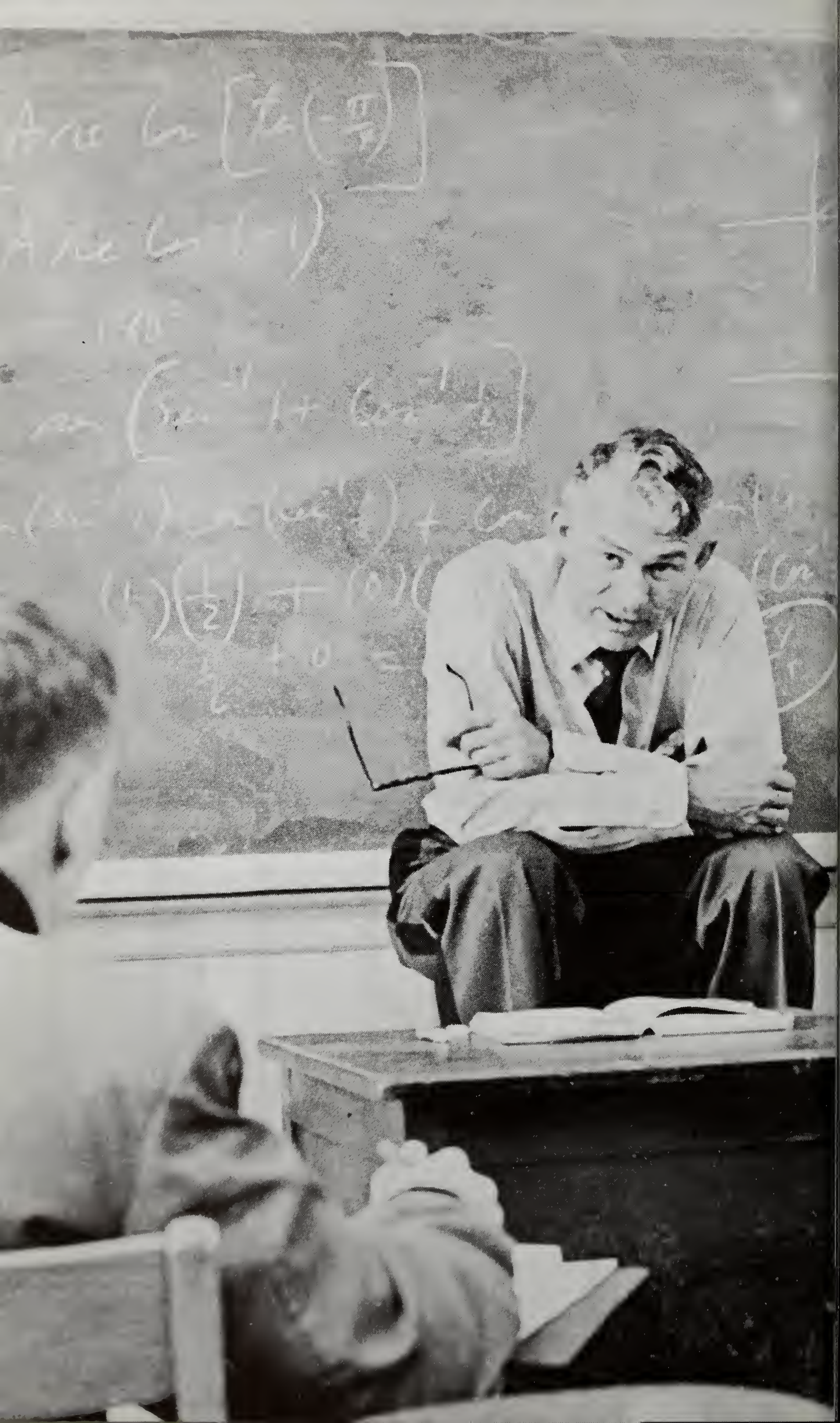
71-309. *Elementary Geography* Three Credit Hours
Required of all history majors.

An introductory course dealing primarily with the elements and principles of geography. Familiarity with important global features and locations is stressed. Topics include: maps, oceans, atmosphere and winds, climate (elements and patterns), landforms, soils and agriculture, mineral resources, and industry.

*71-310. *Cultural Geography* Three Credit Hours
An application of geographic principles to human activities in selected regions of the world. Cultural patterns are contrasted and compared in the light of the physical environment.

*71-311. *Economic Geography* Three Credit Hours
The geographic foundations and distribution of economic activities in different parts of the world.

*71-312. *Historical Geography* Three Credit Hours
A survey of geographic influences in prehistory and history. Various theories of geographical determinism are evaluated against the backdrop of historical realities.



# Department of Mathematics

Professors: Reves, Hutchison, Sutton
Associate Professors: Thompson, Brown, Crumley, McIntyre
Assistant Professors: Hull, Kirkland, Hill, Ingraham, Crabtree, Hathaway, Trotter, Metts

The stated purpose of The Citadel is the training of young men for service to their country as civilian leaders or as officers in the armed forces, if the need arises. To meet the demands of this modern scientific age such a program of education must include basic studies in chemistry, physics, and mathematics. To this end all students at The Citadel are required to take at least one year of mathematics. In the science and engineering majors two or more years of mathematics must be scheduled.

The customary mathematical techniques are developed in all the courses of the department, but students are encouraged to obtain results through reasoning processes rather than by sterotyped use of formulas.

The department offers two courses of study: a B.S. in Mathematics for students who desire a thorough training in undergraduate mathematics and who may wish to pursue graduate work in this field; and a B.A. in Mathematics for students whose interests may be somewhat more diversified.

## B.S. Mathematics Major

There is today an ever-increasing demand for college graduates trained in mathematics, on the part of government and industrial laboratories as well as schools and colleges. The B.S. Mathematics course of study includes 21 semester hours of electives to be chosen from non-required mathematics courses numbered above 300 or from related fields, including computer science. The required courses are four semester hours of computer science, 36-201 and 36-301, and the following 48 semester hours of mathematics: 30-131, 30-132, 30-231, 30-232, 30-240, 30-303, 30-305, 30-318, 30-321, 30-322, 30-401, 30-411, 30-412, 30-414, 30-422 (or 30-420).

## B.A. Mathematics Major

A number of students may wish to pursue careers in secondary-school mathematics teaching or to continue higher education in the fields of biology, business administration, computer science, or political science, fields which are continually requiring greater emphasis on mathematics. The course of study leading to a B.A. in Mathematics includes a total of 51 semester hours in approved and general electives. The candidate must take one semester hour of Computer Programming, and 33 semester hours of mathematics, namely 30-101, 30-102, 30-201, 30-202, 30-232, 30-240, and 15 semester hours of mathematics electives. Approved electives must have the approval of the department head.

30-101 and 30-102. *Fundamental Mathematics* Three Credit Hours Each Semester

Required of all arts freshmen.

A modern treatment of the essential topics of college algebra and trigonometry including the elementary theory of sets, vectors, and matrices.

30-111. *College Algebra* Three Credit Hours

Offered on demand.

A brief review of elementary algebra followed by the study of the binomial theorem, progressions, theory of equations, and determinants.

30-112. *Trigonometry* Three Credit Hours

Offered on demand.

Definition and applications of the trigonometric functions; identities; equations; solution of right and oblique triangles.

30-119. *College Algebra and Trigonometry* Five Credit Hours

A modern treatment of the essential topics of college algebra and trigonometry, including the elementary theory of sets, vectors, and matrices.

30-131 and 30-132. *Analytic Geometry and Calculus* Four Credit Hours Each Semester

Prerequisite: 30-119, or a satisfactory score on the Mathematics Achievement Test, Level I.

Required for B.S. degree in Chemistry, Engineering, Mathematics, and Physics.

A unified treatment of the theory and applications of plane analytical geometry and the differential and integral calculus of functions of one variable.

30-201 and 30-202. *Introduction to Calculus and Analytic Geometry* Three Credit Hours Each Semester

Prerequisites: 30-101 and 30-102, or their equivalent.

Elective for majors not requiring calculus; required for B.A. degree in Mathematics.

A basic course in the calculus designed to provide a background for an understanding of the mathematics essential in the fields of modern social science and education. Fundamental ideas are emphasized so that some skill in the formation of new problems in the language of mathematics may be acquired.

30-231. *Intermediate Calculus* Four Credit Hours

Prerequisites: 30-131 and 30-132.

Required for B.S. degree in Chemistry, Engineering, Mathematics, and Physics.

The analytical geometry of three dimensions; the differential and integral calculus of functions of two or more variables.

30-232. *Differential Equations* Three Credit Hours

Prerequisite: 30-202 or 30-231.

Required for B.S. degree in Chemistry, Engineering, Mathematics, and Physics and for B.A. degree in Mathematics.

Differential equations of the first order and degree; linear differential equations of higher order; miscellaneous differential equations; applications.

30-240. *Linear Algebra* Three Credit Hours

Prerequisite: 30-132 or 30-202.

Required of mathematics majors; elective to others.

Vector spaces; systems of linear equations; bases; subspaces; algebra of matrices; inverses; determinants; orthogonal transformations; quadratic forms.

30-303. *Modern Algebra* Three Credit Hours

Prerequisite: 30-132 or 30-202.

Required for B.S. degree in Mathematics.

Mathematical systems. Groups, rings, integral domains, fields, vector spaces, advanced topics from linear algebra.

30-305. *Modern Geometry* Three Credit Hours

Prerequisite: 30-132 or 30-202.

Required for B.S. degree in Mathematics.

Special topics from axiomatic geometry; Euclidian geometry; projective geometry; non-Euclidean geometry; metric projective geometry.

30-307 and 30-308. *Projective Geometry* Three Credit Hours Each Semester

Prerequisite: 30-231.

Homogeneous point and line coordinates; principles of duality; cross ratio; projective forms; the conics and their properties.

30-312. *Linear Programming* Three Credit Hours

Prerequisites: 30-131 and 36-201, or approval of department head.

Topics from linear algebra, the simplex method, duality theory, networks and flows, selected applications.

30-318. *Numerical Analysis* Three Credit Hours

Prerequisite: 36-301.

Required for B.S. degree in Mathematics.

Approximation theory; roots of algebraic and transcendental equations; iterative methods; numerical differentiation and integration; numerical solution of differential equations; mathematical methods for the computer.

30-321 and 30-322. *Advanced Calculus* Three Credit Hours Each Semester

Prerequisite: 30-232.

Required for B.S. degree in Electrical Engineering, Mathematics, and Physics.

Vector calculus; Bessel's functions; partial differential equations, Fourier series; LaPlace transforms; functions of a complex variable.

30-401. *Real Analysis* Three Credit Hours

Prerequisite: 30-303.

Required for B.S. degree in Mathematics.

Dedekind cuts, completeness, perfect sets, Cantor set, Heine Borel theorem, sequences, series, continuity, differentiation.

30-405 and 30-406. *Probability and Statistics* Three Credit Hours Each Semester

Prerequisite: 30-132 or 30-202.

Combinatorial problems; discrete and absolutely continuous random variables; law of large numbers; central limit theorem; estimation; hypothesis testing; confidence intervals; maximum likelihood methods; non-parametric methods and robustness.

30-411. *Number Theory* Three Credit Hours

Prerequisite: 30-132 or 30-202.

Required for B.S. degree in Mathematics.

The Euclidean algorithm; prime and composite integers; elementary Diophantine equations; Pythagorean triples; Euler's phi-function; congruences; Euler-Fermat theorems; exponents and primitive roots; quadratic residues.

30-412. *History of Mathematics* Three Credit Hours

Prerequisite: 30-131 or 30-202.

Required for B.S. degree in Mathematics.

A survey of the development of mathematics from the time of the ancients to the present; analysis of causes for the retardation of the advancement of mathematics in different centuries; selected readings from significant areas of mathematics used to show the contributions of mathematics to the development of science.

30-414. *Topology* Three Credit Hours

Prerequisite: 30-401.

Required for B.S. degree in Mathematics.

Set axioms, functions, relations, well ordering, topological spaces, continuity, separation, metric spaces, compactness, connectedness.

30-415 and 30-416. *Reading Courses* Three Credit Hours Each Semester

Prerequisite: exceptional ability and background, and approval of department head.

Directed reading on assigned topics in mathematics; weekly conferences with the instructor; a term paper.

30-420. *Senior Research Project* Three Credit Hours

Prerequisite: exceptional ability and background, and approval of department head.

30-422. *Complex Analysis* Three Credit Hours

Open to B.S. Mathematics seniors.

A course which features a variety of topics in advanced analysis to meet the needs of seniors who are not engaged in the senior research projects 30-420; selected topics from complex function theory; complex functions, sequences and limits; complex differentiation and integration; Cauchy theorem; complex series and uniform convergence; harmonic functions.

## Computer Science

The Department of Mathematics, in cooperation with the Computer Center, offers a group of courses in computer science designed to meet the needs of several categories of students.

All business administration majors are required to take 36-305 (Computer Principles). They may then elect 36-306 (Management Information Systems), or 36-311 and 36-312 (Methods of Operations Research). Since all college graduates should be able to deal effectively with computers, political science majors, education majors, or other arts majors are encouraged to take 36-205 (Introduction to Computing) followed by 36-306, 36-311, or 36-312 as electives. Students in the Naval ROTC program may use 36-205 (Introduction to Computing) to satisfy the computer-science requirement.

Students majoring in biology or chemistry may wish to take some or all of the courses listed above, or they may prefer to elect the sequence of courses recommended below for other science students.

Those majoring in electrical engineering, physics, or mathematics should take 36-201 (Computer Programming) in the sophomore year, followed by 36-301 (Applied Numerical Methods) in the junior year. Students who want to prepare themselves for a career in the field of computers will want to take as many other computer science courses as possible, as well as 20-407 (Logical Design of Digital Computers) and 20-419 (System Simulation).

36-201. *Computer Programming* One Credit Hour

Required of electrical engineering and mathematics sophomores; open to others.

The application of mathematical methods and digital computers to basic problems in engineering and science; practice in writing programs in Fortran IV.

36-203. *Computer Programming* Two Credit Hours

Offered only in the Evening Program.

A more comprehensive treatment of the material covered in 36-201.

36-205. *Introduction to Computing* Three Credit Hours

Alsorithms, programs, and computers. Basic programming and program structure. Programming and computing systems. Debugging and verification of programs. Data representation. Organization and characteristics of computers. Survey of computers, languages, systems, and applications. Computer solution of several numerical and nonnumerical problems, using one or more programming languages.

36-206. *Introduction to Discrete Structures* Three Credit Hours
Prerequisite: 36-205.

Review of set algebra including mappings and relations. Algebraic structures including semigroups and groups. Elements of the theory of directed and undirected graphs. Boolean algebra and propositional logic. Applications of these structures to various areas of computer science.

36-301. *Applied Numerical Methods* Three Credit Hours
Prerequisites: 36-201 and 30-232, or approval of department head.
Required for B.S. degree in Electrical Engineering and Mathematics.

Analysis of computational problems and the development of computer techniques for their solution. An introduction to numerical methods; error analysis; linear systems of equations; zeros of functions; quadrature; numerical solution of differential equations.

36-302. *Computer Organization and Programming* Three Credit Hours
Prerequisite: 36-201.

Logical basis of computer structure; machine representation of information; flow of control; instruction codes; subroutines; linkages; macros; interpretive and assembly systems.

36-305. *Computer Principles* Three Credit Hours
Prerequisite: 5-205 (Business Statistics) or 47-312 (Biostatistics)
Required of business administration juniors; open to others.

Introduction to programming languages; flow charting, package utilization. Examples and problems in information retrieval, accounting and statistics.

36-306. *Management Information Systems* Three Credit Hours
Prerequisite: 36-305.

Design of large-scale, computer-oriented information systems. Data collection, file organization, directory construction, and search techniques. On-line information retrieval, retrieval models and processes.

36-311 and 36-312. *Methods of Operations Research* Three Credit Hours Each Semester

Applications and elementary theory of selected topics from operations research. Topics included are linear algebra, linear and non-linear programming, transportation and assignment problems, network analysis, game theory, dynamic programming, queing theory, and Markov processes. Applications to managerial problems, economic behavior, and military strategy are considered.

36-401. *Data Structures* Three Credit Hours
Prerequisite: 36-302.

Basic concepts of data. Linear lists, strings, arrays, and orthogonal lists. Representation of trees and graphs. Storage systems and structures, and storage allocation and collection. Multilinked structures. Symbol tables and searching techniques. Sorting (ordering) techniques. Formal specification of data structures, data structures in programming languages, and generalized data management systems.

36-402. *Programming Languages* Three Credit Hours
Prerequisite: 36-401.

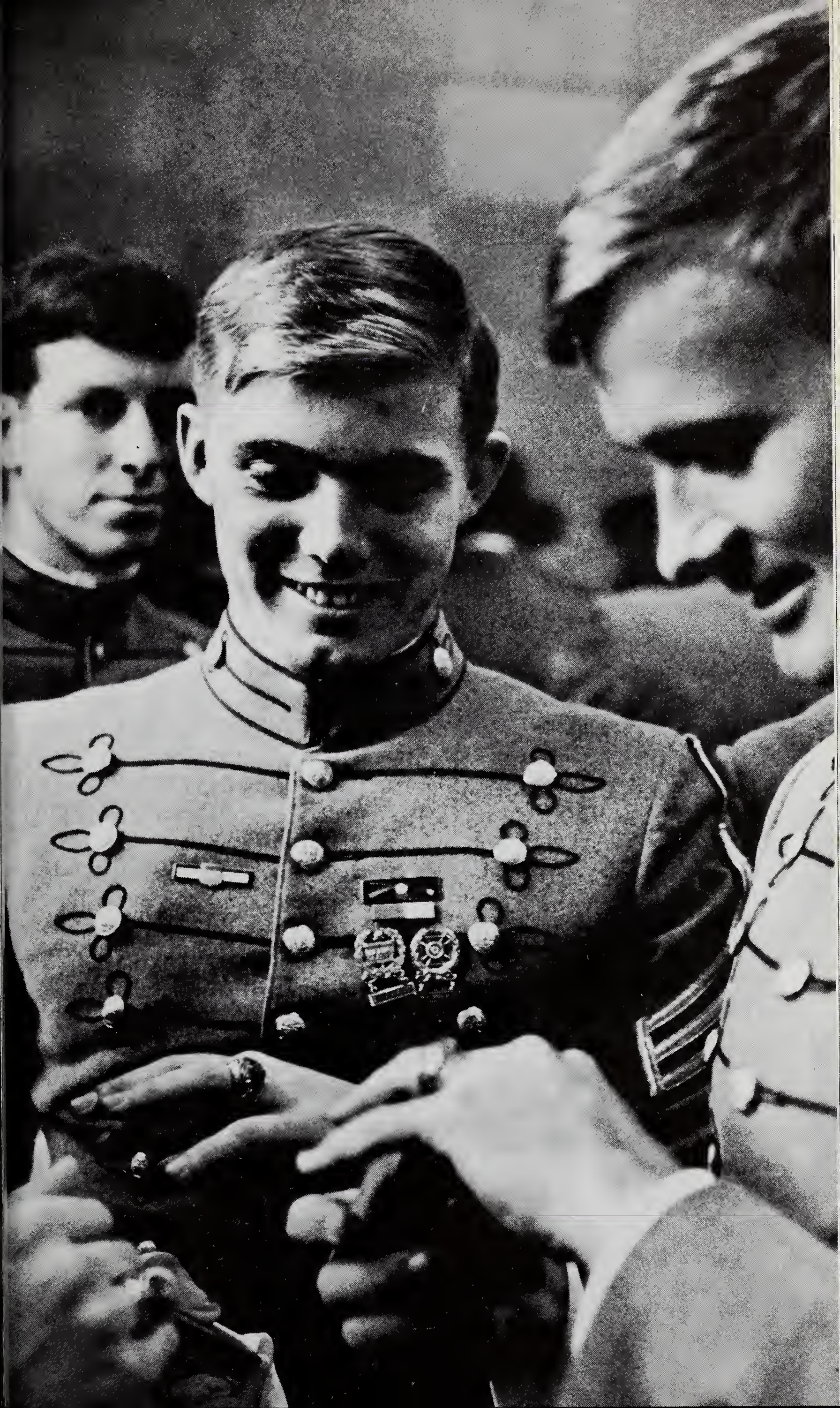
Formal definition of programming languages including specification of syntax and semantics. Simple statements including precedence, infix, prefix, and postfix notation. Global properties of algorithmic languages including scope of declarations, storage allocation, grouping of statements, binding time of constituents, subroutines, coroutines, and tasks. List processing, string manipulation, data description, and simulation languages. Ru-time representation of program and data structures.

## Computer Center

In recent years many important applications for high-speed digital computers have been found in practically all fields of human endeavor. The Computer Center was established for the purpose of offering training in this increasingly important field.

The depth and extent of a student's activities in this field are largely dependent on his field of study and on his own initiative and interest. Languages for communicating with the computer are taught in several courses in the sophomore and junior years. Computer programs are written by students and processed by Computer Center personnel.

The IBM 1130 system has the capability of compiling programs written in Fortran, RPG, or Cobol. A large library of programs and subroutines is available to support work in business administration, statistics, engineering, the sciences, and mathematics. The computer system has a working memory of 8,192 words and a random-access memory of 1,024,000 words. On-line peripheral equipment includes a digital plotter, a card reader-punch, and a line printer.



# Department of Military Science

Professor: Hood
Assistant Professors: Puckhaber, Coggins, Richardson, Mills, Mace, Luff, Jones, Lamison, Schremp, Wilson, Avriette

The four-year General Military Science Course of Army ROTC offers instruction in subjects common to all branches of the U. S. Army. Many of the subjects taught in this department, however, have a close relationship to subjects taught by other departments of the college, such as, U. S. Army and national security, American military history, military law, and the role of the United States in world affairs. In addition, the Department of Military Science organizes and supervises all Army ROTC activities at The Citadel.

The four-year course is divided into a basic course and an advanced course. The first two years comprise the basic course, and the last two years, including a six-week summer encampment at a U. S. Army installation, comprise the advanced course. Credit for prior military training may be granted, if appropriate, but the new cadet must report such training to the Military Science Department as soon as possible on his arrival. Although all students are required by college regulations to take four years of ROTC, not all cadets qualify for commissions in the armed forces.

The following courses comprise the four-year Army ROTC curriculum:

8-101. *First Year Basic* Two Credit Hours
(First Semester-Fourth Class Year)

This semester and the succeeding semester provide the student with the fundamentals and background necessary to pursue later courses of military instruction. In the first semester, he receives instruction on the weapons of the infantry platoon and company, including marksmanship training on the school's outdoor range. Later in the semester he learns the organization of the Army from the squad to the division.

8-102. *First Year Basic* Two Credit Hours
(Second Semester-Fourth Class Year)

During this semester, the student learns the relationship between the U. S. Army and the other services and the national government, the organization of the Department of Defense, its relationship to national policy making, and how policy is translated and transmitted to action units in the armed forces. The student is introduced to basic military map reading, and in the spring he will spend a weekend in the field to introduce him to field living in preparation for more extensive field problems in his sophomore and junior years.

8-201. *Second Year Basic* Two Credit Hours
(First Semester-Third Class Year)

The first semester of the third class emphasizes leadership training and a military history course that reviews American history with emphasis on political and military aspects. It is a study of the causes of wars of the United States and the strategy and tactics involved.

8-202. *Second Year Basic* Two Credit Hours
(Second Semester-Third Class Year)

During the second semester the student continues the study of basic map and aerial photograph reading begun in his freshman year and begins his study of Army operations and basic military tactics. He will also spend a weekend in the field in the spring which will be an extension of the field training begun in the freshman year.

8-301. *First Year Advanced* Two Credit Hours
(First Semester-Second Class Year)

The instruction presented in the first semester of the junior year includes military leadership, a study of the different branches of the Army, communications and counterinsurgency instruction, and a detailed study of small unit tactics. The military leadership training presents leadership principles and requires the student to act as a small unit leader in practical exercises.

8-302. *First Year Advanced* One Credit Hour
(Second Semester-Second Class Year)

During the spring semester the student continues his leadership training, begins military-instructor training (in which he presents military instruction to his class), and receives extensive and detailed map reading instruction. Additionally, he participates in field training exercises that provide the opportunity for him to apply the leadership principles and tactical training received in the classroom. The field training and classroom instruction during the spring semester prepare the student for the training he will receive during his six-week summer encampment.

8-401. *Second Year Advanced* Two Credit Hours
(First Semester-First Class Year)

During the first semester of the senior year the student gets detailed instruction in administration, logistics, the Army readiness program, and military law; continues his leadership training; and studies the role of the United States in world affairs. The subjects during this and the succeeding semester provide the student with the basic knowledge and techinques utilized by the junior officer in carrying out his duties and responsibilities. During this first semester he learns the latest Army regulations and their application to the military unit, and he participates in practice courts which require him to function as a member in a court-martial. In his study of the role of the United States in world affairs, the student receives an orientation in geographic and economic factors, their influence on the division of people into nations, and the causes of war.

8-402. *Second Year Advanced* One Credit Hour
(Second Semester-First Class Year)

During the second semester of the senior year the student is schooled on the mission, organization, and capabilities of the Army's divisions; the principles of war; fundamentals of offensive and defensive tactical operations; tactical air and airmobile operations; leadership; and an orientation on military service to prepare him to take his place as an officer in the U. S. Army and to familiarize him with his obligations and responsibilities as an officer.

8-410. *Flight Instruction Program* Two Credit Hours
(First and Second Semester-First Class Year)

Elective course for cadets who pass the required physical and aptitude examinations. The course includes 35 hours of ground training in the theory of flight, meteorology, Federal Aviation requirements, navigation and communication, general services, and flight safety practices. Requirement for credit is successful completion of the FAA written examination.

8-411. *Flight Instruction Program Laboratory* One Credit Hour
(First and Second Semester-First Class Year)

Required of those cadets enrolled in 8-410, to be conducted concurrently with 8-410.

The course includes 36½ hours of in-flight instruction including dual and solo flights, cross-country flying, and final examinations and certification by the Federal Aviation Administration. Cadets may be awarded the FAA private pilot's certificate upon completion of this course.

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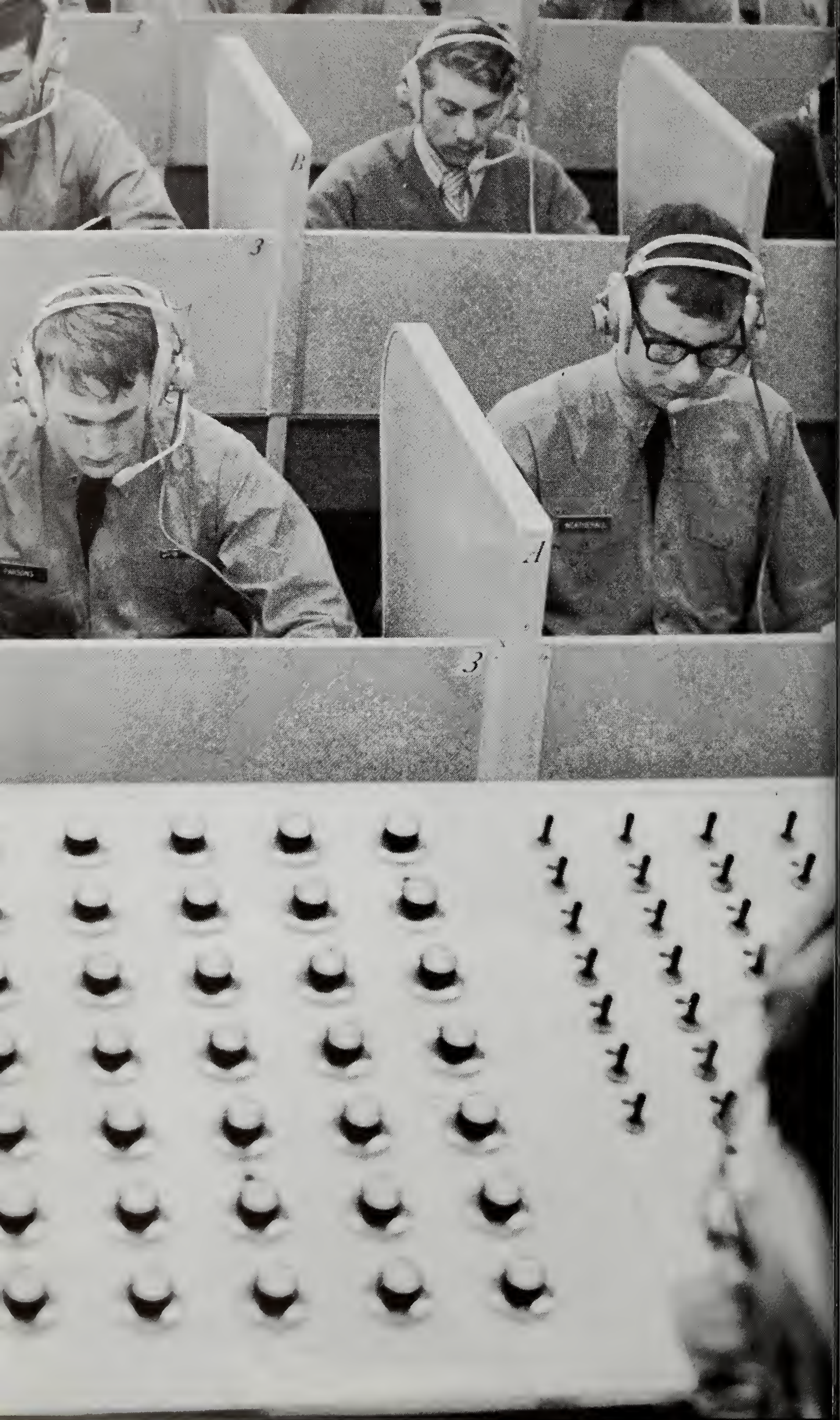
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# Department of Modern Languages

Professors: H. Smith, Pappas, Johnson, Spence
Associate Professor: Ralston
Assistant Professors: Pieper, Warren, Frohlich, Gundel, DeMille, Stacy, Sipes, Tinnell

A student majoring in modern languages must attain a thorough knowledge of one language, spoken and written, a reasonable degree of competence in a second, and a good understanding of the important writers, the literary developments, and the cultures which these languages represent. Upon successful completion he is prepared to do graduate work in the language chosen for his major work.

The five modern languages offered by the department are among the most important because of the wealth of material, both literary and scientific, which has been published in them, and because of the fact that most educated individuals, no matter what their mother tongues may be, are fluent in either English or one of these five.

Students who elect languages as their major field must satisfactorily complete at least eight courses (i.e. 48 semester hours) in languages, including, for one language, at least three courses above the intermediate level, of which two must be the Survey of French Literature, German Literature, or Spanish Literature and advanced composition and conversation in the same language. The exact sequence of courses may vary according to the language chosen for major work and the point at which college work in languages was begun. Students wishing to take a language course as an elective may take any course for which they have done the prerequisite work.

The language laboratory constitutes an integral part of the elementary and intermediate courses in the Department of Modern Languages. It provides intensive practice in speaking, listening, and understanding by means of tape recordings designed to provide greater oral-aural facility in the various modern foreign languages offered. Exercises in the laboratory are closely integrated with classroom work.

For juniors the following non-departmental electives are recommended:
51-302, Educational Psychology
52-201, Introduction to Philosophy
52-309, Modern Philosophy
60-414, Latin American Affairs
70-305 and 70-306, Europe in the Twentieth Century
70-403 and 70-404, Latin American History
70-410, History of Modern Russia
80-415 and 80-416, The English Language

## Spanish

90-101 and 90-102. *Elementary Spanish* Three Credit Hours Each Semester

For students electing Spanish and having entered The Citadel with less than two units of the language.

Pronunciation and elements of Spanish grammar; written and oral exercises; laboratory exercises.

90-201 and 90-202. *Intermediate Spanish* Three Credit Hours Each Semester

Prerequisite: 90-102 or two entrance units.

A course to develop further the general understanding of the language, oral and written; review of grammar; reading and discussion in Spanish; laboratory exercises.

90-301 and 90-302. *Introductory Survey of Spanish Literature* Three Credit Hours Each Semester

Prerequisite: 90-202 or permission of the department head.

A general survey of Spanish literature from its beginnings to the present time; extensive reading, reports, discussion in Spanish.

90-303 and 90-304. *Spanish-American Literature* Three Credit Hours Each Semester

Prerequisite: 90-202 or permission of the department head.

Leading works from Central and South America, with both individual and class reading; reports; discussion in Spanish.

90-305 and 90-306. *Advanced Spanish Composition and Conversation* Three Credit Hours Each Semester

Prerequisite for 90-305: 90-202 or permission of the department head.
Prerequisite for 90-306: 90-305 or permission of the department head.

Advanced instruction in the practical use of Spanish, stressing current topics of interest and striving for oral and written fluency. Emphasis on rapid reading of more difficult prose than in the earlier courses, on the development of style, and, in 90-306, on the cultural development of Spanish-speaking countries, their history, life, and thought.

90-401 and 90-402. *Spanish Literature of the Golden Age* Three Credit Hours Each Semester

Prerequisite: 90-202 or permission of the department head.

Literature of the late sixteenth and seventeenth centuries, the age producing the characters of Don Quixote and Don Juan; a study of the works of Cervantes, Lope, Tirso, Calderon, and others; reports; discussion in Spanish.

## German

91-101 and 91-102. *Elementary German* Three Credit Hours Each Semester

For students electing German and having entered The Citadel with less than two units of the language.

Pronunciation and the elements of German grammar; written and oral exercises; laboratory exercises.

91-201 and 91-202. *Intermediate German* Three Credit Hours Each Semester

Prerequisite: 91-102 or two entrance units.

Review of elementary grammar; reading and conversation in German; laboratory exercises.

91-203 and 91-204. *Scientific German* Three Credit Hours Each Semester

Prerequisite: 91-102 or two entrance units.

For students taking the chemistry, physics, or premedical course. First-year grammar study continued; translation of texts in various sciences; special stress on sentence structure and wordbuilding.

91-301 and 91-302. *Introductory Survey of German Literature* Three Credit Hours Each Semester

Prerequisite: 91-202 or permission of the department head.

A general survey of German literature from its beginnings to the present time; extensive reading, lectures, reports, discussion in German.

91-303 and 91-304. *German Literature of the Nineteenth Century* Three Credit Hours Each Semester

Prerequisite: 91-202 or permission of the department head.

Representative works of outstanding poets, novelists, and dramatists, with discussion of the literature of the period; assigned reading and reports.

91-305 and 91-306. *Advanced German Composition and Conversation* Three Credit Hours Each Semester

Prerequisite for 91-305: 91-202 or permission of the department head.

Prerequisite for 91-306: 91-305 or permission of the department head.

Advanced instruction in the practical use of German, stressing current topics of interest and striving for oral and written fluency. Emphasis on rapid reading of more difficult prose than in the earlier courses, on the development of style, and, in 91-306, on the cultural development of German-speaking countries, their history, life, and thought.

91-401 and 91-402. *Goethe's Faust* Three Credit Hours Each Semester

Prerequisite: 91-202 or permission of the department head.

Goethe's greatest drama, *Faust,* studied in connection with his life and with regard to his message today; its genesis and growth; reading and discussion of Part I and Part II; Faust das Puppenspiel and its relation to Goethe's *Faust;* lectures, reading, and reports.

## French

92-101 and 92-102. *Elementary French* Three Credit Hours Each Semester

For students who elect French and have entered The Citadel with less than two units of the language.

Pronunciation and elements of French grammar; written and oral exercises; laboratory exercises.

92-201 and 92-202. *Intermediate French* Three Credit Hours Each Semester

Prerequisite: 92-102 or two entrance units.

For students who have completed 92-102 or have entered The Citadel with two or three units of the language.

Composition and conversation based on the reading material; grammar review to correct faults in usage; laboratory exercises.

92-301 and 92-302. *Introductory Survey of French Literature* Three Credit Hours Each Semester

Prerequisite: 92-202 or permission of the department head.

A general survey of French literature from its beginnings to the present time; extensive reading, reports, discussion in French.

92-305 and 92-306. *Advanced French Composition and Conversation* Three Credit Hours Each Semester

Prerequisite for 92-305: 92-202 or permission of the department head.

Prerequisite for 92-306: 92-305 or permission of the department head.

Advanced instruction in the practical use of French, stressing current topics of interest and striving for oral and written fluency. Emphasis on rapid reading of more difficult prose than in the earlier courses, on the development of style, and, in 92-306, on the cultural development of French-speaking countries, their history, life, and thought.

92-403 and 92-404. *Eighteenth Century French Literature* Three Credit Hours Each Semester

Prerequisite: 92-202 or permission of the department head.

Political and philosophical thought in the eighteenth century, traced through the writings of Montesquieu, Voltaire, and Rousseau; the beginnings of Romanticism as shown in Rousseau and other writers; lectures in French; collateral readings and reports.

92-405 and 92-406. *The Classical Period of French Literature* Three Credit Hours Each Semester

Prerequisite: 92-202 or permission of the department head.

The literature of the seventeenth century, that of France's most distinctive and in many respects finest contribution to the world's literature and culture; special attention given to the plays of Corneille, Racine, and Molière.

92-407 and 92-408. *Nineteenth Century French Literature* Three Credit Hours Each Semester

Prerequisite: 92-202 or permission of the department head.

French literature from Chateaubriand to Zola and Anatole France; the romantic, realistic, and naturalistic movements, with special emphasis on Blazac, Hugo, and Flaubert; lectures in French, discussion, outside reading.

## Portuguese

93-101 and 93-102. *Elementary Portuguese* Three Credit Hours Each Semester

Pronunciation and the elements of Portuguese grammar; written and oral exercises; laboratory exercises.

93-201 and 93-202. *Intermediate Portuguese*

Prerequisite: 93-102

Completion and review of elementary grammar; reading of literary texts; conversation in Portuguese; laboratory exercises.

## Russian

99-101 and 99-102. *Elementary Russian* Three Credit Hours Each Semester

Pronunciation and elements of Russian grammar; written and oral exercises; laboratory exercises.

99-201 and 99-202. *Intermediate Russian* Three Credit Hours Each Semester

Prerequisite: 99-102.

A continuation of 99-101 and 99-102, with emphasis on vocabulary building, the development of reading skill, and conversation; laboratory exercises.

## All Modern Languages

90-421 and 90-422.
91-421 and 91-422.
92-421 and 92-422. *Advanced Individual Reading Course* Three Credit Hours Each Semester

Open to seniors only, and only with permission of the department head.

## Classical Languages

(Offered when demand justifies)

97-101 and 97-102. *Elementary Latin* Three Credit Hours Each Semester

Recommended for pre-law students.

Latin grammar and translation. Course dependent upon the background of the student.

97-201 and 97-202. *Intermediate Latin* Three Credit Hours Each Semester

Prerequisite: 97-102 or two entrance units.

Translation from Latin prose writers.

98-101 and 98-102. *Elementary Greek* Three Credit Hours Each Semester

Recommended for students preparing for the study of medicine or theology.

Fundamentals of the Greek language.

98-201 and 98-202. *Intermediate Greek* Three Credit Hours Each Semester

Prerequisite: 98-102.

Selections from Xenophon or the New Testament.

# Department of Naval Science

Professor: Foxworth
Assistant Professors: Kimbrell, Rich, Jardine, Rosemont, Herskowitz, McCleskey

The Navy-Marine Corps instructional plan consists of requirements for completion of an academic major supported by designated electives in conjunction with a sequence of professional courses taught by Navy and Marine Corps officers. This basic naval concept of academic majors, selected electives, and professional courses makes full use of the expertise of the total faculty for maximum academic reward. Naval cadets are required to complete a chemistry, physics, or biological/earth science course. Those who are capable of completing calculus without an undue load of prerequisites are encouraged to do so. Naval ROTC cadets are required, where possible, to complete the following courses as electives in their academic major: 70-315 and 70-316 (History of Modern Warfare), 70-205 (History of Naval Warfare), 36-205 (Introduction to Computing), and 60-201 (American National Government).

## Sequence of Naval Science Instruction

Fourth Class Year — All Naval cadets
- 9-101 (Naval Orientation)
- 9-202 (Naval Ships Systems)

Third Class Year — All Naval cadets
- 9-201 and 9-202 (Seapower Seminars)

Second Class Year
- Candidates for U. S. Navy commissions
  - 9-301 and 9-302 (Navigation and Naval Operations)

Candidates for U. S. Marine commissions
  9-303 and 9-304 (Evolution of Warfare)

First Class Year
  Candidates for U. S. Navy commissions
    9-401 and 9-402 (Naval Weapons Systems)
  Candidates for U. S. Marine commissions
    9-403 (Amphibious Warfare) and a college elective as approved by the Professor of Naval Science

## Description of Courses

9-101. *Naval Orientation and Leadership* Two Credit Hours

A general introduction to the Naval Service as to its organization, components and their interrelationship. (Navy- or Marine-faculty taught).

9-102. *Introduction to Naval Ships Systems* Two Credit Hours

A course designed to familiarize Naval Service students with the types, structure, and purpose of naval ships. Ship compartmentation, propulsion systems, auxiliary power systems, interior communications, and ship control are included. Elements of ship design to achieve safe operations and ship stability characteristics are examined. (Navy-faculty taught.)

9-201 and 9-202. *Sea Power Seminars*

A series of seminars in the role of sea power in the economic and political arenas of the United States and its foreign policy (Navy- or Marine-faculty taught.)

9-301 and 9-302. *Navigation and Naval Operations I & II* Two Credit Hours for 9-301
One Credit Hour for 9-302

A comprehensive study of the theory, principles, and procedures of dead reckoning and celestial navigation. The course includes piloting, spherical triangulation, mathematical analysis, sights, publications, sextants, and applications. Rules of the road, lights, signals, and navigational aids, including electronic and inertial systems, are also covered. Tactical formations and dispositions and relative motion and maneuvering board problems are analyzed for force effectiveness. Navigation and seamanship receive practical application on the waterways surrounding Charleston. (Navy-faculty taught.)

9-303. *Evolution of Warfare* Two Credit Hours

Provides the student with a basic knowledge of the art and concepts of warfare, and its evolution from the beginning of recorded history to the American Civil War. Included in this study are the consideration of the influence that leadership, political, economic, sociological, and technological developmental factors have had on warfare, through the Civil War. (Marine-faculty taught.)

9-304. *Evolution of Warfare and Modern Basic Strategy and Tactics* One Credit Hour

Provides the student with a continued study of the art and concepts of warfare, and its evolution from the American Civil War to the present. Included in this study are the consideration of the theoretical principles behind modern strategy and tactics. (Marine-faculty taught.)

9-401 and 9-402. *Naval Weapons Systems* Two Credit Hours for 9-401
One Credit Hour for 9-402

The primary goal of this course is to provide the student with a mastery of the basic principles and an understanding of the concepts used in the analysis of modern shipboard weapons systems. The concept of weapons systems and the systems approach are explored. The techniques of linear analysis of ballistics and weapons control systems are investigated and stated as transfer functions. This course provides the tools for the student to understand the basic principles that underlie all modern naval weapons systems. (Navy-faculty taught.)

9-403. *Amphibious Warfare* Three Credit Hours

Provides the student with an appreciation of the influence of the sea upon the history of Western civilization and the relationship of the sea to geopolitical theories; the evolution of United States maritime strategy and the development of amphibious warfare as an instrument of that strategy. The course presents the development of the concepts, principles, and techniques of amphibious operations as practiced by the Navy and Marine Corps, with particular attention directed toward the amphibious assault. (Marine-faculty taught.)

# Department of Physical Education

Professor: Dellastatious
Associate Professors: Feigl, Ezell
Assistant Professors: Styles, Smyth, Hamilton, Cavalier
Instructor: Lesesne

The purpose of the Department of Physical Education is threefold:

1. Professional Physical Education Program: Prepare and qualify physical education majors for secondary-school teaching in the fields of physical education, athletics, and a selected minor.
2. Required Physical Education Program: Organize and administer a two-year required physical education program for the Corps of Cadets.
3. Intramural Program: Organize and administer an intramural program for the Corps of Cadets.

## The Physical Education Major

The Department of Physical Education requires the following courses for its majors:

59-201. *Introduction to Physical Education* Three Credit Hours

An introductory survey of physical education; historical background, nature, scope, and function of physical education; its aims, objectives, and principles.

59-204. *Sports I* Three Credit Hours

Teaching methods with applied techniques in wrestling, soccer, and volleyball.

59-301. *Personal and Community Health* Three Credit Hours

A body of knowledge from the biological and social sciences which is essential for sound decisions in health maintenance and conducive to proper sense of health values for the individual and the community.

59-303. *Basketball* Two Credit Hours

Comparative study of defensive and offensive systems of team play; development of basic individual skills and techniques; teaching and coaching; and rules and officiating.

Lecture: one hour; laboratory: two hours.

59-306. *Sports II* Three Credit Hours

Theory and practice in the fundamentals of teaching and coaching in baseball and track-field. Administration and execution of meets and tournaments. Teaching methods and techniques applied.

59-308. *Gymnastics and Tumbling* Two Credit Hours

Theory and practice of gymnastics, tumbling, and developmental activities with respect to teaching methods, skills, and the conduct of gymnastic meets.

Lecture: one hour; laboratory: two hours.

59-400. *Directed Teaching*

A requirement for certification, observation and teaching in approved high schools under approved supervising teachers, supervision by approved college supervisor. Student must provide own transportation.

The physical education major must be classified as a senior; he must have passed scheduled physical education and education courses prior to Directed Teaching, passed senior physical fitness test and served as an assistant instructor in the first-semester freshman RPE program. Student must be approved for Directed Teaching (59-400) by head of Department of Physical Education; the criteria for this approval can be obtained from physical education office.

59-401. *Organization and Administration of Physical Education* Three Credit Hours

Organization: delegation of authority and responsibility; use of the democratic method; formation of teams, tournaments, and leagues; program aims and objectives; curriculum building; course construction; and lesson planning.

Administration: selection, purchase, and care of equipment; office policies and systems; budgeting in finances; publicity; and team and game management.

59-402. *Care and Prevention of Athletic Injuries* Two Credit Hours

Discussion, demonstration, and application in the skills and procedures for the caring and prevention of athletic injuries.

59-403. *Adaptive Physical Education* Two Credit Hours

Identification of various physical, mental, and emotional disabilities with implications to physical education. Procedures of individual posture analysis; lesson planning; individual corrective exercise; and motivation for improvement.

59-405. *Health Education* Three Credit Hours

Organization and administration of a school health program with specific attention to methods and techniques of health instruction.

59-407. *Football Theory* Two Credit Hours

Analysis and evaluation of offensive and defensive tactics, formations, and plays; individual techniques and fundamental skills in position play; teaching materials and methods; coaching; and rules and rule interpretations.

59-408. *Introduction to Sports Psychology* Three Credit Hours

Analysis and application of current research in the areas of maturation and development, learning theory, perception, personality, motivation, and group dynamics which relate directly to physical education and competitive athletics.

59-412. *Tests and Measurements in Physical Education* Two Credit Hours

The place and importance of tests and measurements in the physical education teaching process; the use of scientific measurement now available in physical education.

59-414. *Kinesiology* Two Credit Hours

The anatomical and mechanical analysis of functional posture and motor performance (physical skills), for the purpose of understanding and recognizing normal and faulty movement as based on the latest available scientific information.

59-416. *Physiology of Exercise* Three Credit Hours

Prerequisites: 47-104, 47-303, and 47-304.

The latest in research findings pertaining to man's performance in muscular activity for a better understanding of the response of the body to exercise.

59-418. *Elementary School Physical Education*

A study of the progressively graded program of activities for the elementary schools, grades 1-6. Theoretical as well as practical material will be developed for each grade.

59-420. *Senior Research Project* Three Credit Hours

A research problem, conducted by physical education majors as an independent study. Topic, technique, and procedure for this study must be approved by department head.

## Required Physical Education

All freshman and sophomore cadets are required to participate in and pass four semesters, or the equivalent, of required physical education (RPE) during the freshman and sophomore years.

### FOURTHCLASSMEN (Freshmen)

All freshman cadets must enroll and participate in two semesters of RPE. The fall program consists of a comprehensive adult fitness course (59-101 and 59-111, Foundations of Physical Education, lecture and laboratory). The purpose of this course is to provide basic information in the area of exercise physiology, diet and weight control, and various exercise programs which will aid the cadet in making intelligent decisions regarding future participation in fitness activities.

During the spring semester, freshman cadets are enrolled in either 59-102, Survival Swimming-Wrestling, or 59-104, Beginning Swimming-Wrestling, which is based upon the results of a test of minimal swimming ability administered prior to fall-semester registration. (The test consists of jumping feet first into deep water, treading water, and swimming 25 yards using the front crawl stroke.)

All freshman RPE courses meet twice weekly.

### THIRDCLASSMEN (Sophomores)

All sophomore cadets must enroll and successfully complete two semesters of sophomore required physical education. The following sports activities are taught in the sophomore RPE program:

| | |
|---|---|
| 59-220 | Archery |
| 59-221 | Badminton |
| 59-222 | Bowling |
| 59-223 | Fencing |
| 59-224 | Beginning Golf |
| 59-225 | Handball |
| 59-226 | Judo |
| 59-227 | Skin and Scuba Diving |
| 59-228 | ARC Senior Lifesaving and Survival Swimming |
| 59-229 | Tennis |
| 59-230 | Weight Training |
| 59-231 | Trampolining |

| | |
|---|---|
| 59-232 | Volleyball |
| 59-233 | ARC Water Safety Instructor's Course |
| 59-234 | Jogging |
| 59-235 | Sailing |

A cadet may not receive credit toward the RPE requirement by participating in and passing the same sports activity more than once.

All sophomore sports activity classes meet once a week.

Any sophomore cadet wishing to waive the sophomore RPE requirement may do so by passing a proficiency test which consists of two parts—a written test and a performance test. A cadet must score a passing grade (C or higher) on the written test in order to be considered proficient enough to participate in the performance test.

A sophomore cadet wishing to use the RPE exemption program should register for the program at least one week prior to the registration date for the following semester at the office of the Physical Education Department. Not applicable to physical education majors unless approved by the head of the Department of Physical Education.

## Intramurals

The intramural program represents an integral part of the cadet's life, and is, therefore, required of all cadets not involved in intercollegiate sports or competitive athletic clubs. The program consists of 23 different activities including both individual and team sports which lead to physical and mental fitness. All teams' activities have been separated for freshman and upperclass participation to give all cadets an opportunity to engage in the more vigorous competitive sports.

The requirement by class is as follows:

First class — one individual or dual sport
Second class — one individual or dual sport
Third class — two team sports
Fourth class — one team sport each semester

| *Fall* | *Winter* | *Spring* |
|---|---|---|
| Flag Football (UC) | Bowling (FR) | Handball (Singles) |
| Flag Football (FR) | Basketball (UC) | Swimming |
| Volleyball (UC) | Wrestling | Softball (FR) |
| Volleyball (FR) | Basketball Freethrow | Softball (UC) |
| Tennis | Table Tennis | Gymnastics |

Handball (Doubles)
Bowling (UC)
Basketball (FR)
Steeplechase
Track
Paddle Rackets (Singles)
Paddle Rackets (Doubles)
Basketball Golf
Weight Lifting
Skish
Badminton
Sigma Delta Psi
Water Polo

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# Department of Physics

Professor: Bender
Associate Professor: Byrd
Assistant Professors: Bailey, Voegeli, Byrne, Berlinghieri

Physics, the study of matter and radiation, is basic to all other sciences and engineering disciplines. Developments such as radar, the transistor, integrated circuitry, lasers, computers, and space science were primarily the creation of the research physicist, and present-day developments in fundamental particles, plasmas, field theory, and solid-state physics promise a rich harvest of revolutionary devices in the near future. The Department of Physics offers three introductory courses. For the non-science major or the future teacher, 26-203 and 26-204 (Introduction to College Physics) constitute a survey course which emphasizes basic principles with particular attention paid to the exciting developments of today's research efforts and applications to modern technology. For the scientist, engineer, and mathematician, 26-110, 26-211, and 26-212 (General College Physics) cover the fundamental principles of physics. For the biologist and potential doctor or dentist, 26-205, 26-206, and 26-207 (College Physics) offer the basic principles but with emphasis on the ideas and techniques which apply to these fields. Descriptive courses in elementary astronomy, 26-201 and 26-202, are also provided as electives.

The program for physics majors is flexible in that the student who does not intend to make his livelihood in physics but wishes to obtain insight into our scientific and technological civilization can take the same formal courses as the dedicated student who plans on going to graduate school or to work in an industrial, testing, or government institution. While the student can switch from one category to another, the standards and academic work expected will be more extensive for the professional student.

The department sponsors a student section of the American Institute of

Physics to provide extracurricular activities and training for physics students. 26-419 (Research Planning) and 26-420 (Senior Research Project) are flexible in that they offer a choice of preparing a theoretical study project or designing and building the necessary apparatus to measure an important experimental result of recent times. Stress is placed on the coming world of digital electronics where so many of today's measurements are linked to computers and where apparatus of increasing complexity is commonplace.

The physics major will normally take the program as listed on pages 138-139. At the discretion of the head of the department, modern language may be postponed one year, and up to six credit hours in courses numbered above 300 in scientific fields may be substituted for an equal number of required credit hours in physics courses numbered above 300.

26-101. *Modern Physics Lectures* One Credit Hour

Required of all freshmen majoring in physics.

A non-mathematical course consisting of lectures on modern physics topics. Class notes and library reading will be required.

Lecture: one hour.

26-110, 26-211, and 26-212. *General College Physics* Four Credit Hours Each Semester

Prerequisite: 30-131 (Analytic Geometry and Calculus). (May be taken concurrently with 30-131 with permission of the heads of the student's major department and the Department of Physics.)

Required of all students majoring in engineering, mathematics, chemistry, or physics.

Mechanics, electricity and magnetism, heat, sound, light, and modern physics covered with no assumption of prior knowledge of physics; laboratory of about 14 individual quantitative experiments each semester based on fundamental principles.

Lecture: three hours; laboratory: two hours.

26-201. *Astronomy* Three Credit Hours

A descriptive treatment of the general astronomy of the solar system. The constellations as seen from our moving earth, along with a study of planets, comets, and their origins. Planetarium showings and live telescope viewing will be provided.

26-202. *Astronomy* Three Credit Hours

The universe outside the solar system. The sun as a typical star. The Milky Way and other galaxies are studied along with their past and future.

Explanations of pulsars, quasars, novae, cosmic dust. Finally, the extent of the universe, current cosmological models. This course may be taken independently of 26-201.

26-203 and 26-204. *Introduction to College Physics* Four Credit Hours Each Semester

The aim of this course is to present the developments of modern physics in a manner suitable for students who do not have a strong mathematical background. A course designed primarily for the non-science major and the future teacher, it might be labeled "Physics for Taxpayers" for it will help the non-scientist act in an informed way in today's technically oriented society.

Lecture: three hours; laboratory: two hours.

26-205, 26-206, and 26-207. *College Physics* Four Credit Hours Each Semester

Prerequisite: 30-102 (Fundamental Mathematics).

Required of all premedical, biological, and science students who do not take 26-110, 26-211, and 26-212.

A course of elementary nature designed to stress the principles and the unifying concepts of classical and modern physics. Of particular interest to biologists and to prepare premedical students to meet the requirements for admission to the better medical schools; 14 two-hour laboratory periods each semester devoted to student experiments dealing with the topics of mechanics, heat, wave motion, optics, electricity and magnetism, and nuclear physics.

Lecture: three hours; laboratory: two hours.

26-301. *Introduction to Meteorology* Three Credit Hours

Prerequisite: 26-204 (Introduction to College Physics) or 26-211 (General College Physics).

Structure of the atmosphere and of weather systems with an introduction to the physical laws which govern weather processes and atmospheric motion.

Lecture: three hours.

26-302. *Atmospheric Mechanics* Three Credit Hours

Prerequisite: 26-301.

Hydrostatics; thermal and pressure fields; equations of motion; geostrophic, gradient, and thermal winds; kinematics; discontinuities.

Lecture: three hours.

26-309. *Optics* Four Credit Hours

Prerequisites: 26-212 and 30-231 (Intermediate Calculus).

Required of all physics juniors; open to others.

Principles of geometrical and physical optics, the general equations of wave motion, reflection, dispersion, interference, diffraction, polarization, and coherence.

Lecture: three hours; laboratory: two hours.

26-310 *Heat and Thermodynamics* Three Credit Hours

Prerequisite: 26-212.

Required of all physics juniors; open to others.

Kinetic theory of gases and transport phenomena, thermodynamics of gases. Maxwell-Boltzmann statistics, thermoelectricity, and theory of thermal radiation.

Lecture: three hours.

26-311 and 26-312. *Electricity and Magnetism* Three Credit Hours Each Semester

Prerequisites: 26-212 and 30-231.

Required of all physics juniors; open to others.

The electrostatic field and its effect on matter, the properties of magnetic fields and magnetic materials, electro-magnetic effects, vector potentials, displacement currents, Maxwell's equations, Lorentz force on particles, periodic currents.

Lecture: three hours.

26-318. *Electronics* Four Credit Hours

Prerequisites: 26-212 and 30-231.

Required of all physics juniors; open to others.

Characteristics of diodes and transistors and their use as amplifiers, oscillators, and switches. Digital techniques, integrated circuits, and the techniques of using complicated circuitry are stressed.

Lecture: three hours; laboratory: two hours.

26-319. *Mechanics* Three Credit Hours

Prerequisites: 26-212 and 30-231.

Required of all physics juniors; open to others.

Dynamics of rigid bodies, Lagrangian and Hamiltonian dynamics, collision kinematics, and central force field motion.

Lecture: three hours.

26-401 and 26-402. *Modern, Atomic, and Nuclear Physics* Three Credit Hours Each Semester

Prerequisites: 26-309, 26-310, 26-311, 26-312, and 26-319.

Required of all physics seniors; open to others.

The basic experimental data leading to quantum mechanics and relativity are covered with special emphasis on understanding atomic and nuclear physics and fundamental particles.

Lecture: three hours.

26-403. *Advanced Laboratory Physics* One Credit Hour

Required of all physics seniors.

26-405 and 26-406. *Quantum Mechanics* Three Credit Hours Each Semester

Prerequisites: 26-309, 26-310, 26-311, 26-312, and 26-319.

Required of all physics seniors; open to others.

An introductory course to quantum mechanics with emphasis on physical principles rather than mathematical techniques. Stress is placed on understanding how quantum mechanics is used in explaining the behavior of physical systems.

Lecture: three hours.

26-419. *Research Planning* One Credit Hour

Required of all physics seniors.

An outstanding recent development is chosen by one or more students and studied intensively.

26-420. *Senior Research Project* Three Credit Hours

Prequisite: 26-419.

Required of all physics seniors.

The work started in 26-419 (Research Planning) is applied in the laboratory, or if theoretical, to a better understanding of natural phenomena.

CAPTAIN AMERICA

# Department of Political Science

Professor: Arcilesi.
Associate Professor: Kingston
Assistant Professors: Moreland, Payne, Benson, Wardlaw, Baker, Beebe, Steed, Boykin

The political science curriculum, designed to give the student some understanding of the political, social, and economic aspects of the modern world, emphasizes a spirit of scientific inquiry. Academic courses most commonly required for admission to the best graduate schools in political science, economics, and history are available to its majors. The majority of students interested in the study of law choose political science as their major subject area. It has a strong appeal for those who anticipate administrative careers in government, particularly in the Foreign Service and the numerous intelligence agencies of the national government. The required course of study for political science majors is tabulated in the curriculum of the department on pages 140-141.

60-201. *American National Government* Three Credit Hours

A study of the American constitutional background, the rights and liberties of persons, political opinions and voting behavior, political parties and pressure groups, and the organization and the role of the President, the Congress, and national courts in policy formation and administration.

60-202. *State and Local Government* Three Credit Hours

The course is concerned with the role of the states in the American constitutional system, the institutional organizations of state governments, and the relationships between these agencies and those of the political subdivisions.

60-301 and 60-302. *International Law and Organization* Three Credit Hours Each Semester

Required of political science juniors. Open to others receiving permission of the instructor.

A survey of international law as developed through treaties, customs, usages, and decisions of national and international tribunals; a study of the League of Nations, the United Nations, and the international machinery for the promotion of harmony between states.

60-308, Problems in International Law, may be substituted for 60-302.

60-303. *American Foreign Relations* Three Credit Hours

Required of political science juniors. Open to others receiving permission of the instructor.

A study of the organization of the American Government for the conduct of foreign relations; the institutions and elements in the making of foreign policy; emphasis on the important problems and developments of the postwar years.

60-304. *American Parties and Politics* Three Credit Hours

Required of political science juniors. Open to others.

An analysis of the dynamics of American politics, with particular emphasis upon the factors entering into the formulation of public opinion, the role of pressure groups, and the operations of the party system.

60-305. *Public Administration* Three Credit Hours

Prerequisite: 60-201, American National Government.

An introduction to the role of administration in the governmental process which considers principles of administrative control, personnel, and fiscal management.

60-307. *Comparative Politics* Three Credit Hours

Required of all political science majors. Open to others with permission of the instructor.

An analysis of various political systems in terms of institutions, structure, and function. Emphasis on the development of common criteria for the evaluation and comparison of these divergent systems.

60-308. *Problems in International Law* Three Credit Hours

Prerequisite: 60-301, International Law.

An advanced survey of the elements of international law and the application of basic principles. Emphasis will be given to an in-depth study of jurisdiction over aliens, state liability for official acts, international reclamations, and the regulation of international hostilities.

60-309. *American Political Thought* Three Credit Hours

A study of the basic political ideas which have developed in response to American constitutional, social, and economic conditions.

60-310. *American Presidency* Three Credit Hours

Open to juniors and seniors.

A study of the modern Presidency with attention to its origins and its historical and constitutional development. Emphasis is placed on an examination of the various roles and functions of the President and on an analysis of Presidents in action.

60-311 *The Legislative Process* Three Credit Hours

Organization and procedures of a legislative body. Its role in policy formation and its relationships with other parts of the political and governmental system.

60-312. *Judicial Process and Behavior* Three Credit Hours

Open to juniors and seniors.

A general survey of the nature and function of law, the process of legal growth, the use of legal reasoning, legal institutions (chiefly the American state and federal judiciaries), the roles of judges and lawyers, the judicial decision-making process, and the impact of court decisions.

60-313. *National Security Policy* Three Credit Hours

An examination of the components of United States security policy. Factors, both internal and external, affecting national security will be considered.

60-401 and 60-402. *Constitutional Law* Three Credit Hours Each Semester

Required of political science seniors. Open to others receiving permission of the instructor.

A study of the underlying and basic principles of the Constitution as reflected in the leading decisions of the United States Supreme Court.

60-405. *International Politics* Three Credit Hours

Required of all political science seniors. Open to others receiving permission of the instructor.

An analysis of the international system, of the nation-state, the role of power in international politics, and the goals and instruments of foreign policy.

60-406. *International Politics* Three Credit Hours

Required of all political science seniors not taking 60-413, Urban Politics.

An investigation of current international relations, especially the problems and policies of the Communist Bloc, the North Atlantic Alliance, the European Common Market, and the less developed countries. These problems and policies are considered with particular attention to their relations with East-West rivalry.

60-407 and 60-408. *Political Theory* Three Credit Hours Each Semester

Required of political science seniors. Open to liberal arts seniors.

Major theoretical writing from Plato to Thomas Hill Green; emphasis on a comparison of basic ideas and on the relationship between theories and contemporary problems.

60-409. *Far Eastern Affairs* Three Credit Hours

Open to juniors and seniors.

A survey of China from 1911 to the present, with emphasis on the rise of Communism in China, on the structure and operation of the Chinese People's Republic, and on contemporary Chinese foreign policy.

60-410. *Southeast Asian Affairs* Three Credit Hours

Open to juniors and seniors.

A study of the development of selected countries in the area with emphasis on the problems of transition, ideology orientations, roles in the cold war, and the importance of the area to the national interest and foreign policy of the United States.

60-413. *Urban Politics* Three Credit Hours

This course is a study of mass participation in urban political affairs, political parties on the local level, the municipal reform movement, and alternative approaches to the study of local political systems. Emphasis is placed on the problems of local governments in metropolitan areas.

60-414. *Latin American Affairs* Three Credit Hours

Open to juniors and seniors.

A study of the Latin American power elements and related problems; emphasis on the relationships and importance of the area to the United States.

60-415. *Russian Affairs* Three Credit Hours

Open to juniors and seniors.

An analysis of the geographic, demographic, economic, political, psychological, and military bases of Soviet power. Emphasis on the objective techniques and operations of Soviet foreign policy.

60-416. *National Policy and Administration* Three Credit Hours

Open to juniors and seniors.

Analytical and critical survey of the process of formulating and administering basic domestic policy, the role and influence of special interest groups; the problems of the President and Congress in formulating general interest programs.

60-417. *African Politics* Three Credit Hours

Open to juniors and seniors.

An analysis of the politics and modernization in Africa; emphasis on the newly independent states of the continent and their political, cultural, demographic, and historical characteristics; and consideration of tribal factors influencing the process of modernization.

60-418. *Middle Eastern Affairs* Three Credit Hours

Open to juniors and seniors.

A survey of the Middle East; a study of the power elements and related problems; emphasis on the role of the area in American foreign policy.

60-419. *Scope and Methods in Political Science* Three Credit Hours

Open to juniors and seniors with permission of the instructor.

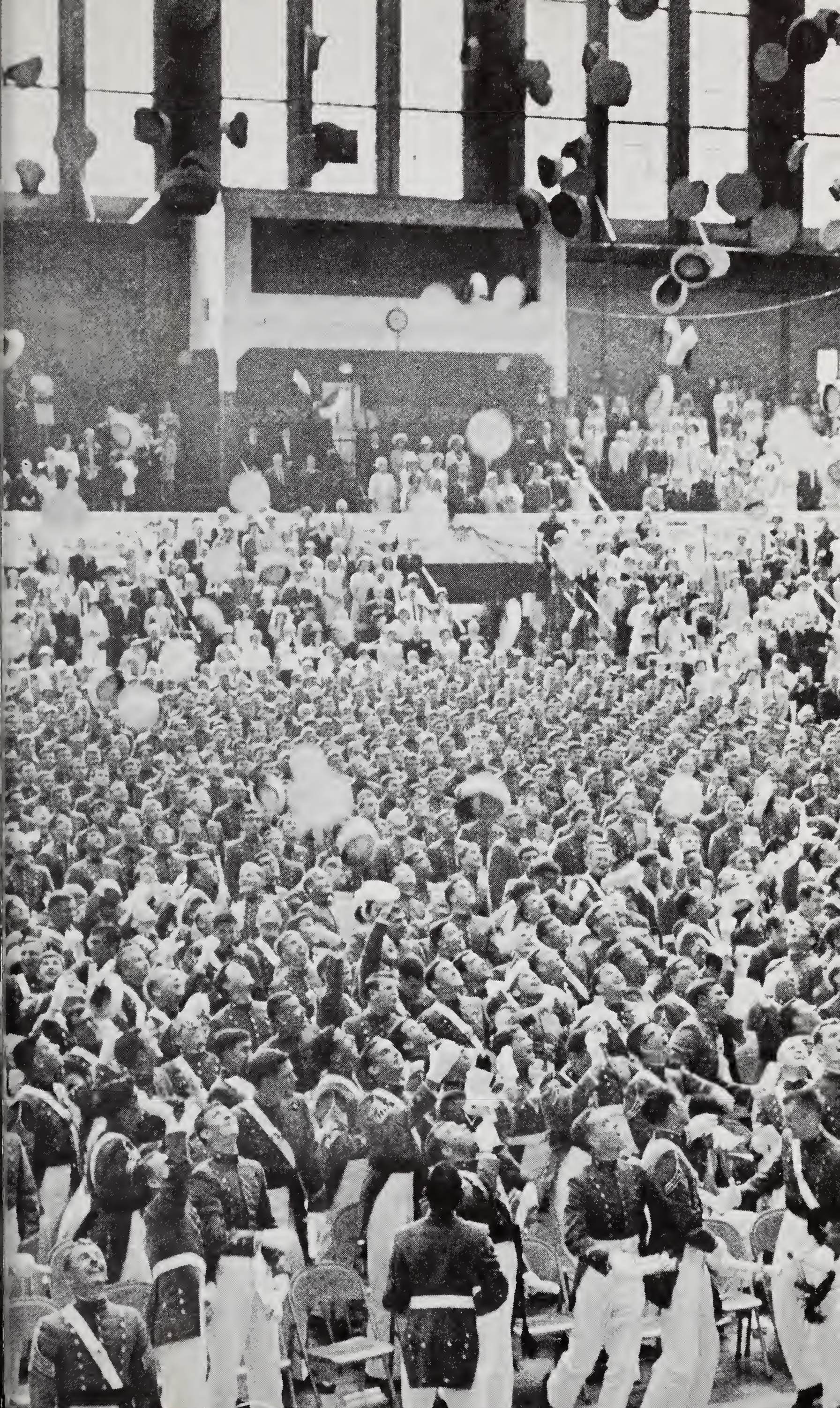
An examination of methods in the scientific study of political phenomena. Emphasis will be given to the systematic study of politics and contemporary research problems in political science, including research design, data collection, and data analysis.

60-420. *Senior Research Project* Three Credit Hours

Required of all seniors as a prerequisite to graduation. An approved three credit hour elective may be substituted.

60-422. *Public Opinion and Propaganda* Three Credit Hours

A systematic analysis of the political process incorporating the technique of opinion survey design and analysis; the analysis of voting behavior; and the study of the mechanisms for influencing opinion through the use of modern techniques of propaganda.



# Graduate Program

## Master of Arts in Teaching

The Master of Arts in Teaching program is designed to assist school personnel in extending their knowledge, improving their skills, and enhancing their professional status. Those who are seeking certification, having acquired the prescribed undergraduate basic training, may earn the standard South Carolina teaching credentials by majoring in education and minoring in a subject-matter field. Those who are already certified, as well as those not seeking certification, may elect to major in a subject-matter field and minor in education. Those who seek certification in administration and supervision may elect to enroll in a planned program of studies in this area. The graduate courses are given in the evening program and during the summer sessions.

Admission to courses will be through approval of an application along with transcripts of all graduate and undergraduate credits earned and proof of graduation from an approved four-year college; proof of a satisfactory score on the National Teachers Examination or the Graduate Record Examination or the Miller Analogies Test; letters of recommendation from two former college professors or immediate superiors in recent employment; and a personal interview with a designated college official.

Admission to candidacy for the degree will be through the above requirements and, additionally, completion of not less than six hours in approved courses at The Citadel, creditable toward the MAT degree; proof of a satisfactory score on the Graduate Record Examination, evaluations from two of the student's graduate professors at The Citadel; and approval of his program of studies. Candidates who hold either a doctoral or a master's degree from an accredited institution are not required to present a score from the Graduate Record Examination for admission to candidacy, providing all other requirements are met.

A minimum of 12 semester hours in an approved program must be completed by a student at The Citadel after being admitted to candidacy for the MAT degree.

### Requirements for Graduation

Credit requirements include completion of 30 semester hours with a minimum average grade of "B," based on a grade ratio, in the individual's major and a minimum grade average of "B" in his minor. Graduate credit will be given only for grades of "A," "B," and "C." At least one-half of the courses taken must be courses on the 500 level, whereas the remainder may be selected from approved courses on the 300 and 400 levels. Not more than six hours, relevant to the student's program, may be accepted by transfer from other colleges. Transfer credits on the graduate level will be accepted only if the applicant has been admitted into an accredited program at the college or university from which he seeks to transfer those credits. Correspondence course credits are not acceptable. Creditable hours must have been earned within six years of the graduation date.

A major in biology, English, history, mathematics, secondary education, or school administration and supervision will consist of 18 to 21 hours, the minor, 9 to 12 hours. A major in special education will consist of a 36-hour planned program. Major work is offered in the following departments: Biology, Education, English, History, and Mathematics.

A student who majors in biology, English, history, or mathematics must choose a minor in secondary education. One who majors in secondary education must choose a minor in biology, English, history, or mathematics. One who majors in secondary school administration and supervision or elementary school administration and supervision must choose a minor in psychology. A student who majors in special education must complete a 36-semester-hour program of specialized courses.

For further information consult The Citadel Graduate Bulletin or write Director of Graduate Studies, The Citadel, Charleston, S. C. 29409.

## Master of Business Administration

A program leading to the Master of Business Administration degree will begin in the fall of 1972. Applicants will be admitted to the MBA program on the basis of scholastic ability for graduate study, qualities of character, motivation, and other qualities appropriate to administrative responsibility.

For further information write Department of Business Administration, The Citadel, Charleston, S. C. 29409.

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*Assistant Professor of Business Administration*

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Greenville-Piedmont Citadel Club — William M. Grant, '62, 1006 N. Main St., Greenville, S.C. 29607

Greater Greenwood Citadel Club — A. Louis Hook, Jr., '61, Route 5, Box 172, Greenwood, S.C. 29646

Fort Leavenworth Citadel Club — LTC James D. Poteat, 410-3 Kearny Ave., Ft. Leavenworth, Kans. 66027

Dillon-Marion County Citadel Club — Dr. James S. Garner, Jr., '43, P.O. Box 610, Mullins, S.C. 20574

Miami-South Florida Citadel Club — Gene E. Martin, '52, 7925 SW 154 Terrace, Miami, Fla. 33157

New York Area Citadel Club — Charles N. Eason, '49, 26 Sherman St., Brooklyn, N.Y. 11215

New Orleans Citadel Club — Leonard B. Smith, '53, McDermott International, Inc., P.O. Box 61961, New Orleans, La. 70160

Pee Dee Area Citadel Club — Harry E. Clay, '35, P. O. Box 529, Darlington, S.C. 29532

Spartanburg Citadel Club — Benjamin S. Willard, '65, Box 3000, Spartanburg, S.C. 29302

Sumter Citadel Club — Dr. S. Perry Davis, '55, P. O. Box 68, Pinewood, S.C. 29125

Triangle Citadel Club — G. S. Triplett, '49, 801 Academy St., Fuquay-Varina, N.C. 29399

Union County Citadel Club — Russell Jeter, '33, 122 Cherokee Ave., Union, S. C. 27526

Richmond-Central Virginia Citadel Club — Dave M. Reid, '59, 413 N. Davis Ave., Richmond, Va. 23220

The Citadel Club of Greater Washington, D. C. — Thomas H. Glenn, Jr., '50, 16740 Frontenac Terrace, Derwood, Md. 20752

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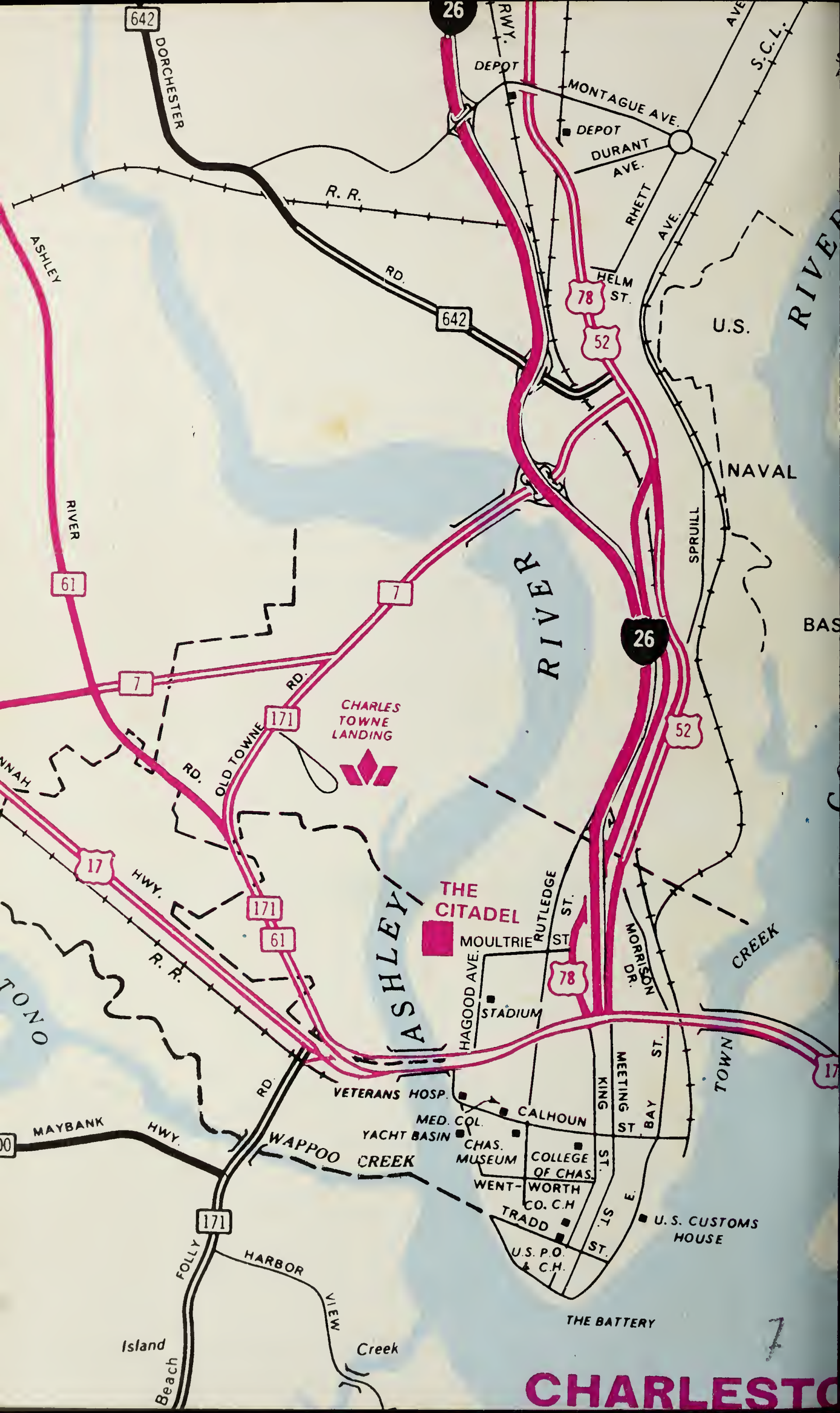
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